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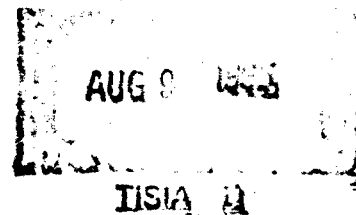
MICROBIOLOGICAL SAFETY BIBLIOGRAPHY

G. Briggs Phillips

Joseph V. Jemski

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JULY 1965



UNITED STATES ARMY
BIOLOGICAL LABORATORIES
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U.S. ARMY BIOLOGICAL LABORATORIES
Fort Detrick, Frederick, Maryland

MISCELLANEOUS PUBLICATION 6

MICROBIOLOGICAL SAFETY BIBLIOGRAPHY

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FOREWORD

Laboratory-acquired illness in personnel of an infectious disease laboratory can be prevented by the combination of a knowledgeable laboratory director and the proper use of safety equipment and procedures. Success is based upon use of equipment and procedures that have been proved practical and efficient and upon the enthusiasm with which the laboratory personnel support the safety program.

This bibliography is published to familiarize laboratory personnel with the available literature on biological safety. It was originally compiled under the auspices of the Animal Care Panel (Animal House Safety Committee) in September 1964. Its favorable reception indicates that this information should now be made available for a more general distribution.

ABSTRACT

More than a thousand articles on biological safety in infectious disease laboratories have been listed for the use of supervisors responsible for the safety of laboratory personnel. An author index is included.

CONTENTS

Foreword.....	iii
Abstract.....	iii
I. ADMINISTRATION, EDUCATION, REGULATIONS, AND STATISTICS.....	1
II. LABORATORY INFECTIONS.....	6
A. Collected Cases and Surveys of Laboratory Infections.....	6
B. Institutional Outbreaks of Infectious Disease.....	7
III. LABORATORY HAZARDS STUDIES.....	9
IV. SAFETY IN ANIMAL CARE.....	17
A. Animal Care and Hazards.....	17
B. Infections Due to Handling Animals.....	21
C. Animal Isolation Equipment.....	25
D. Animal Cross-Infection.....	27
V. DESIGN OF FACILITIES.....	33
A. Policies and General Requirements.....	33
B. Ventilated Cabinets.....	36
C. Air Handling, Ventilation, and Filtration.....	38
D. Germicidal Ultraviolet Irradiation.....	41
E. Aerosol Test Facilities.....	42
F. Process Production of Microorganisms.....	44
VI. LABORATORY EQUIPMENT.....	46
A. Air Samplers.....	46
B. Aerosol Generators.....	49
C. Masks and Respirators.....	49
D. Miscellaneous Equipment.....	50
VII. VAPOR PHASE DISINFECTANTS.....	53
A. Beta-Propiolactone.....	53
B. Ethylene Oxide.....	54
C. Peracetic Acid.....	57
D. Formaldehyde.....	57
E. Miscellaneous Decontamination and Sterilization.....	58
VIII. RELATED BIBLIOGRAPHIES.....	61
Author Index.....	63
Distribution List.....	77

I. ADMINISTRATION, EDUCATION, REGULATIONS, AND STATISTICS

Ident prevention regulations for medical laboratories. 1956. Berufsgenossenschaft für Gesundheitsdienst und Wohlfahrtspflege, Hamburg 26, Germany.

recht, J. Danger due to infectious agents in the laboratory, p. 148-152. Fort, der Biologischen Aerosolschung, 1957-1961. Friedrich-Karl attauer-Verlag, Stuttgart, Germany.

ican Hospital Association. 1954. Hospital safety manual (National safety ual). National Safety Council, Chicago 11, Ill.

erson, R.J. 1950. Protection for the oratory worker. Public Health Rep. 463-465.

otation. 1958. The state public it laboratory, division of hospital ilities. Amer. J. Public Health 40:48.

otation. 1956. Safety measures in the erculosis laboratory. U.S. Navy Medical News Letter 27:30-35. (Also A.M.A. ch. Ind. Health 13:522-524.)

ymous. 1957. Tuberculosis in laboratory workers. Brit. Med. J. 5035:35-36.

ack, J.; Lynch, J.M.; Ladimir, I. 1953. program for protection of research ersons against pathogenic hazards. Public Health Rep. 68:989-992.

aligny, M.A. 1961. Protection against fection in the microbiology laboratory, vices and procedures, p. 151-192. In ne W. Hirsch (ed.) Advances in applied icrobiology. Vol. 3. Academic Press, w York.

10
Committee Report. 1948. Precautions against tuberculous infection in the diagnostic laboratory. Monthly Bull. W.H. Health, Public Health Lab. Serv. 17:1-18.

11
Cook, E.P.M. 1961. Safety in the public health program. Public Health Rep. 76:51-56.

12
Damon, S.R. December 1962. Collection, handling, and shipment of diagnostic specimens, (U.S. Public Health Serv. Bull. 976). U.S. Government Printing Office, Washington, D.C.

13
Darlow, H.M. 1960. An introduction to safety in the microbiological laboratory. Lab. Pract. 9:777-785.

14
Eierer, G.M.; Tucker, E. 1960. Accident surveys and safety programs in two hospital clinical laboratories. Amer. J. Med. Technol. 26:219-227.

15
Editorial. 1956. Laboratory infections. Lancet 2:880-881.

16
Engbaek, C. 1957. Precautions against infection of persons working in the laboratories. Scand. J. Clin. Lab. Invest. 5:195.

17
Fearnough, G.S. 1962. Practical applications of laboratory safety. Can. J. Med. Technol. 24:3-9.

18
Ferris, D.H. 1962. Preparing a check list of microbiological safety procedures for isolation buildings and areas. Bacteriol. News 28:6.

19
Friedman, M.H.F. 1961. Problems in the administration of a medical school animal quarters. Proc. Animal Care Panel 11:172-174.

- 20
Gibson, J. 1955. Safety in a tuberculosis laboratory. Med. Technicians Bull., Suppl. U.S. Armed Forces Med. J. 4:181.
- 21
Gruber, G.B. 1949. Tuberculosis among personnel of pathologic institute. Zentralbl. Allgem. Pathol. Anat. 85:129-134.
- 22
Gucker, F.T., Jr. 1949. Aerosols. Sci. Monthly 68:373-385.
- 23
Halsey, M.N. (ed.). 1961. Accident prevention: The role of physicians and public health workers. American Public Health Association. McGraw-Hill Book Company, Inc., New York. 400 p.
- 24
Hambelton, A. 1956. Safety in the tuberculosis laboratory. Can. J. Med. Technol. 18:70.
- 25
Harris, G.J.; Phillips, G.B. 1958. Safety procedures in the study of infectious aerosols, p. 319. Abstr. Papers, 134th Meeting Amer. Chem. Soc., Chicago, Ill.
- 26
Hull, R.N.; Peck, F.B., Jr.; Ward, T.G.; Nash, J.C. 1962. Immunization against B virus infection: II. Further laboratory and clinical studies with an experimental vaccine. Amer. J. Hyg. 76:239-251.
- 27
Huppert, M. 1957. A technique for the safe handling of Coccidioides immitis cultures. J. Lab. Clin. Med. 50:158-164.
- 28
Instructions for the prevention of accidents in the course of medical laboratory work. 1960. Community Accident Insurance Society, Rheinland/Pfalz, Germany, Andernach.
- 29
Jemski, J.V.; Phillips, G.B. 1963. Microbiological safety equipment. Lab. Animal Care 13:2-12.
- 30
Jemski, J.V.; Phillips, G.B. 1964. Aerosol challenge of animals, p. 273-341. In W.I. Gay (ed.) Methods in animal experimentation. Academic Press, Inc., New York.
- 31
Jensen, K.A. 1954. Toward a standardization of laboratory methods. Bull. Int. Union Against Tuberc. 24:78.
- 32
Ladimer, I. 1955. Human experimentation: medicolegal aspects. 104th Annu. Meeting Amer. Med. Ass., Atlantic City, N.J., June 8, 1955.
- 33
Lind, A. 1957. Danger of T.B. infection to personnel in pathological laboratories. Trans. NAFT Commonwealth Chest Conf. Nat. Ass. Prevent. Tuberc. Tavistock House North, Tavistock Square, London, W.C.1, England.
- 34
Long, E.R. 1951. The hazard of acquiring tuberculosis in the laboratory. Amer. J. Public Health 41:782-787.
- 35
Marvin, R.M. 1962. A combined bacteriology pathology teaching laboratory. J. Med. Educ. 37:1174-1177.
- 36
McClung, L.S. 1960. Suggestions on bacteriological techniques for the beginner. Amer. Biol. Teacher 22:343-351.
- 37
McClung, L.S. 1960. Microbiology teaching aids. Amer. Biol. Teacher 22:352-353.
- 38
Meade, G.M. 1948. The prevention of primary tuberculosis infections in medical students. Amer. Rev. Tuberc. 58:675-683.
- 39
Mehl, J. 1962. Les visques professionnels du personnel hospitaliers et leur reparation. Arch. Maladies Prof. 7-8: 487-492.

- 1
Morrison, E.J. 1960. A survey of safety precautions in the microbiological laboratory. J. Med. Lab. Technol. 17: 1-81.
- 2
Morrison, S.I. 1946. Tuberculosis as an occupational hazard during medical training. Amer. Rev. Tuberc. 54:140-158.
- 3
Madd, S. 1960. The role of medical schools in providing adequately trained laboratory workers for the public health laboratory field. Public Health Ab. 18:59-61.
- 4
Newhall, L.E.J. 1961. Some aspects of the management of an experimental animal wing. J. Animal Techn. Ass. 12:47-53.
- 5
Maneth, L. 1915. The prevention of laboratory infections. Med. Klin. 11: 1398-1399.
- 6
Phillips, G.B. 1957. Safety education for microbiologists. Bacteriol. News 23:27.
- 7
Phillips, G.B. September 1961. Microbiological safety in U.S. and foreign laboratories, (Technical Report 35). U.S. Army Chemical Corps, Biological Laboratories, Fort Detrick, Frederick, Maryland.
- 8
Phillips, G.B. 1962. Safety education for students of microbiology. Amer. J. Med. Technol. 28:291-295.
- 9
Phillips, G.B. 1963. Programming for isolation, quarantine, and infectious disease facilities - discussion. Lab. Animal Care 13:291-298.
- 10
Phillips, G.B.; Jemski, J.V. 1963. Biological safety in the animal laboratory. Lab. Animal Care 13:13-20.
- 11
Pike, R.M.; Sulkin, S.E. 1952. Occupational hazards in microbiology. Sci. Monthly 75:222-228.
- 12
Rees, R.J.W. 1961. Precautions against tuberculo-infection in the animal house. Lab. Animals Centre Collected Papers 10: 51-58.
- 13
Reid, D.D. 1957. Incidence of tuberculosis among workers in medical laboratories. Brit. Med. J. 2:10-14.
- 14
Reitman, M.; Wedum, A.G. 1956. Microbiological safety. Public Health Rep. 71:659-665.
- 15
Riley, R.L.; O'Grady, F. 1961. Airborne infection: Transmission and control. The Macmillan Co., New York. 180 p.
- 16
Robbins, M. 1961. Administration of student education in the clinical laboratory. Amer. J. Med. Technol. 27: 48-51.
- 17
Rosebury, T. 1947. Experimental airborne infection. The Williams and Wilkins Co., Baltimore, Md. 222 p.
- 18
Royal Institute of Chemistry, The. 1949. Report of the conference on the origin and prevention of laboratory accidents. Lectures, Monographs, and Reports, No. 4. 30 Russell Square, London, W.C.1., England.
- 19
Schwab, H.M. 1951. Safety in today's laboratory. Ind. Lab. 2:1-6.
- 20
Smadel, J.E. 1951. The hazard of acquiring virus and rickettsial diseases in the laboratory. Amer. J. Public Health 41:788-795.

- 60 Stebbins, E.L. 1959. The role of the school of public health in the provision of adequately trained laboratory workers. *Public Health Lab.* 17:129-132.
- 61 Sulkin, S.E. 1961. Laboratory-acquired infections. *Bacteriol. Rev.* 25:203-209.
- 62 Sulkin, S.E.; Pike, R.M. 1949. Viral infections contracted in the laboratory. *New Engl. J. Med.* 241:201-205.
- 63 Sulkin, S.E.; Pike, R.M. 1951. Laboratory-acquired infections. *J. Amer. Med. Assoc.* 147:1740-1745.
- 64 Sulkin, S.E.; Pike, R.M. 1951. Survey of laboratory-acquired infections. *Amer. J. Public Health* 41:769-781.
- 65 Sulkin, S.E.; Long, E.R.; Pike, R.M.; Sigel, M.M.; Smith, C.E.; Wedum, A.G. 1963. Laboratory infections and accidents, p. 89-104. In Albert H. Harris and Marion B. Coleman (ed.), *Diagnostic procedures and reagents*. 4th ed. Amer. Public Health Ass., Inc., New York.
- 66 Thomas, G.W. 1957. Safety practices in the clinical laboratory. *Amer. J. Med. Technol.* 23:159-162.
- 67 U.S. Department of Labor. 1958. Work injuries and work injury rates in hospitals, (Bureau of Labor Statistics Bull. 1219). U.S. Government Printing Office, Washington, D.C.
- 68 Veterans Administration-Army-Navy Conference on the Chemotherapy of Tuberculosis. Tuberculosis laboratory methods. *Trans. 14th Conf. Chemotherapy Tuberc.*, p. 507-526, 1955.
- 69 Veterans Administration-Armed Forces Cooperative Study on the Chemotherapy of Tuberculosis. 1962. Handbook of tuberculosis laboratory methods. Veterans' Admin., Dept. Med. and Surg., Washington, D.C.
- 70 Ware, L.L., Jr. 1960. Don't be half safe in the bacteriological laboratory. *Lab. Dig.* 24:10-12.
- 71 Wedum, A.G. 1953. Bacteriological safety. *Amer. J. Public Health* 43:1428-1437.
- 72 Wedum, A.G. November 1955. Defensive aspects of biological warfare in relation to the pharmaceutical industry. *Amer. Drug Manuf. Ass., Res. Develop. Sect., Homestead, Virginia.*
- 73 Wedum, A.G. 1956. Defensive aspects of biological warfare. *J. Amer. Med. Ass.* 162:34-37.
- 74 Wedum, A.G. 1956. Prevention of laboratory-acquired infections. *Amer. J. Med. Technol.* 22:311-315.
- 75 Wedum, A.G. 1956. Protecting laboratory workers from accidental infections. *Comm. Rep. Lab. Sect., Comm. Lab. Infections Accidents, 84th Annu. Meeting Amer. Public Health Ass., Atlantic City, N.J.*
- 76 Wedum, A.G. 1957. Biological warfare scientists pioneer in laboratory safety. *Armed Forces Chem. J.* 11:30-31.
- 77 Wedum, A.G. 1957. Health hazards in laboratories and research areas. *Safety Monographs Coll. Univ.* 7:15-20. National Safety Council, 425 N. Michigan Ave., Chicago 11, Ill.

78

Wedum, A.G. 1957. Working with bacteria. Nat. Safety News 76:20-21, 56, 58.

79

Wedum, A.G. 1959. Policy, responsibility and practice in laboratory safety, p. 105-119. Proc. Second Symp. Gnotobiotic Technol., Univ. Notre Dame Press, Notre Dame, Ind.

80

Wedum, A.G. 1961. Control of laboratory airborne infection. Bacteriol. Rev. 25: 210-216.

81

Wedum, A.G. 1964. Laboratory safety in research with infectious aerosols. Public Health Rep. 79:619-633.

82

Zdrodorskii, P.F.; Golinevich, E.M. 1960. General requirements for safety in rickettsial laboratories: I. Administration, p. 206-208. In P.F. Zdrodorskii and E.M. Golinevich (ed.) The rickettsial diseases. (Translated from Russian.) Pergamon Press, New York.

II. LABORATORY INFECTIONS

A. COLLECTED CASES AND SURVEYS OF LABORATORY INFECTIONS

- 83
Albrecht, J. Danger due to infectious aerosols in the laboratory, p. 148-152. In Fort, der Biologischen Aerosol-Forschung, 1957-1961. Friedrich-Karl Schattauer-Verlag, Stuttgart, Germany.
- 84
Annotation. 1956. Laboratory infections. Lancet 2:880-881.
- 85
Cluff, L.E.; Turner, R.W.; Imboden, J.B.; Cartes, A. 1959. Brucellosis: II. Medical aspects of delayed convalescence. Arch. Intern. Med. 103:398-405.
- 86
Draese, K.D. 1937-1939. Über laboriumsinfektionen mit typhusbazillen und anderen bakterien. Arch. Hyg. Bakteriologie 119-121:232-291.
- 87
Ellingson, H.V.; Kadull, P.J.; Bookwalter, H.L.; Howe, C. 1946. Cutaneous anthrax: Report of twenty-five cases. J. Amer. Med. Ass. 131:1105-1108.
- 88
Epidemiology: Laboratory infections. Public Health Rep. 65:1679-1690, 1950.
- 89
Francis, E. 1925. Tularemia. J. Amer. Med. Ass. 84:1243-1250.
- 90
Furness, M.L.; Guntheroth, W.G.; Willis, M.J. 1952. The frequency of laboratory infections with *Histoplasma capsulatum*; their clinical and X-ray characteristics. J. Lab. Clin. Med. 40:182-185.
- 91
Held, J.E. August 1962. Subhuman primates in the transmission of human hepatitis. 6th CDC Bien. Vet. Conf., Atlanta, Georgia.
- 92
Howe, C.; Miller, E.S.; Kelly, E.E.; Bookwalter, H.L.; Ellingson, H.V. 1947. Acute brucellosis among laboratory workers. New Engl. J. Med. 236:741-747.
- 93
Imboden, J.B.; Carter, A.; Cluff, L.E.; Trever, R.W. 1959. Brucellosis: III. Psychologic aspects of delayed convalescence. A.M.A. Arch. Intern. Med. 103:406-414.
- 94
Johnson, J.E.; Perry, J.E.; Fekety, F.R.; Kadull, P.J.; Cluff, L.E. 1964. Laboratory-acquired coccidioidomycosis: A report of 210 cases. Ann. Intern. Med. 60:941-956.
- 95
Kisskalt, K. 1915. Laboratory infections with typhoid bacilli. Z. Hyg. Infektionskrankh. 80:145-162.
- 96
Kisskalt, K. 1929. Laboratory infections with typhoid bacilli and other bacteria. Arch. Hyg. 101:137-160.
- 97
Kubes, V.; Gallia, F. 1941. Neutralization of the Venezuelan encephalomyelitis virus by human sera. Bol. Inst. Invest. Vet. 2:179-198.
- 98
Love, F.M.; Jungherr, E. 1962. Occupational infection with virus B of monkeys. J. Amer. Med. Ass. 179:801-806.
- 99
Meyer, K.F.; Eddie, B. 1941. Laboratory infections due to brucella. J. Infect. Dis. 68:24-32.
- 100
Overholt, E.L.; Tigertt, W.D.; Kadull, P.J.; Ward, M.K. 1961. An analysis of forty-two cases of laboratory-acquired tularemia. Amer. J. Med. 30:785-816.

- 101
Paneth, L. 1915. Zur verhütung von laboratoriumsinfektionen. Med. Klin. 11:1398-1399.
- 102
Pike, R.M.; Sulkin, S.E. 1952. Occupational hazards in microbiology. Sci. Monthly 75:222-228.
- 103
Pike, R.M.; Sulkin, S.E.; Schulze, M.L. 1963. Continuing importance of laboratory-acquired infections. Annu. Meeting Amer. Public Health Ass., Kansas City, Missouri, November 14, 1963.
- 104
Reid, D.D. 1957. Incidence of tuberculosis among workers in medical laboratories. Brit. Med. J. 2:10-14, 35-36.
- 105
Reinhardt, F. 1917-1918. Zur verhütung von laboratoriumsinfektionen. Zentr. Bakteriол. Parasitenk. Infektionskrankh. 80:456-465.
- 106
Schafer, W. 1950. Laboratory infections especially with typhoid bacilli. Arch. Hyg. Bakteriол. 132:15-32.
- 107
Shubladze, A.K.; Gaydamovich, S.Ya.; Gavrilov, V.I. 1959. Virological study of laboratory infections with Venezuelan equine encephalomyelitis. Vopr. Virusol. 4:305-310.
- 108
Slepishkin, A.N. 1959. Epidemiological study of a laboratory infection with the Venezuelan equine encephalomyelitis virus. Vopr. Virusol. 4:311-314.
- 109
Sulkin, S.E. 1961. Laboratory-acquired infections. Bacteriol. Rev. 25:203-209.
- 110
Sulkin, S.E.; Pike, R.M. 1949. Viral infections contracted in the laboratory. New Engl. J. Med. 241:205-213.
- 111
Sulkin, S.E.; Pike, R.M. 1951. Laboratory-acquired infections. J. Amer. Med. Ass. 147:1740-1745.
- 112
Sulkin, S.E.; Pike, R.M. 1951. Survey of laboratory-acquired infections. Amer. J. Public Health 41:769-781.
- 113
Sulkin, S.E.; Long, E.R.; Pike, R.M.; Sigel, M.M.; Smith, C.E.; Wedum, A.G. 1963. Laboratory infections and accidents, p. 89-104. In Albert H. Harris and Marion B. Coleman (ed.), Diagnostic procedures and reagents, 4th ed. American Public Health Ass., Inc., New York.
- 114
Trever, R.W.; Cluff, L.E.; Peeler, R.M.; Bennett, I.L., Jr. 1959. Brucellosis: I. Laboratory-acquired infections. Arch. Intern. Med. 103:381-397.
- 115
Van Metre, T.E., Jr.; Kadull, P.J. 1959. Laboratory-acquired tularemia in vaccinated individuals: A report of 62 cases. Ann. Internal Med. 50:621-632.
- B. INSTITUTIONAL OUTBREAKS OF INFECTIOUS DISEASE
- 116
Commission on Acute Respiratory Disease, Fort Bragg, N.C. 1946. A laboratory outbreak of Q fever caused by the Balkan grippe strain of Rickettsia burnetti. Amer. J. Hyg. 44:123-157.
- 117
Gross, H.T. 1940. A report of thirteen cases among veterinary students at Kansas State College - Erysipeloid. J. Kansas Med. Soc. 41:329-332.
- 118
Heubner, R.J. 1947. Report of an outbreak of Q fever at National Institutes of Health. Amer. J. Public Health 37: 431-440.
- 119
Hornibrook, J.W.; Nelson, K.R. 1940. An institutional outbreak of pneumonitis. Public Health Rep. 55:1936-1954.

120

Huddleson, F.; Munger, M. 1940. A study of an epidemic of brucellosis due to Brucella melitensis. Amer. J. Public Health 30:944-954.

121

Löffler, W.; Mooser, H. 1942. Mode of transmission of typhus fever: Study based on infection of a group of laboratory workers. Schweiz. Med. Wochensh. 72:755-761.

122

McCoy, G.W. 1930. Accidental psittacosis infection among personnel of the hygienic laboratory. Public Health Rep. 45:843-845.

123

Murray, J.T.; Howard, D.H. 1963. Observations on a laboratory epidemic of histoplasmosis. Amer. Rev. Resp. Dis. 88:106.

124

Nanck, E.G.; Weyer, F. 1949. Laboratory infections with Q fever. Deut. Med. Wochensh. 7:198-202.

125

Newitt, A.W.; Koppa, T.M.; Gudakunst, D.W. 1939. Water-borne outbreak of Brucella melitensis infection. Amer. J. Public Health 29:739-743.

126

Patterson, W.C.; Mott, L.D.; Jenney, E.W. 1958. A study of vesicular stomatitis in man. J. Amer. Vet. Med. Ass. 133:57-66.

127

Robbins, F.C.; Ragan, C.A. 1946. Q fever in the Mediterranean area: Report of its occurrence in allied troops: I. Clinical features of the disease. Amer. J. Hyg. 44:6-22.

128

Robbins, F.C.; Rustigan, R. 1946. Q fever in the Mediterranean area: Report of its occurrence in allied troops: III. A laboratory outbreak. Amer. J. Hyg. 44:64-71.

129

Slepishkin, A.N. 1959. Epidemiological study of a laboratory infection with the Venezuelan equine encephalomyelitis virus. Vopr. Virusol. 4:311-314.

130

Spicknall, C.G.; Huebner, R.J.; Finger, J.A.; Blocker, W.P. 1947. Report of an outbreak of Q fever at the National Institutes of Health. Ann. Intern. Med. 27:28-40.

III. LABORATORY HAZARDS STUDIES

- 31
 Affleck, M.N.; Gray, D.F. 1957. Viable and stainable counts of tubercle bacilli in tuberculous tissue. *Amer. Rev. Tuberc. Pulmonary Dis.* 75:519-520.
- 32
 Albrecht, J. Danger due to infectious aerosols in the laboratory, p. 148-152. In Fort, der Biologischen Aerosol-Forschung, 1957-1961, Friedrich-Karl Schattauer-Verlag, Stuttgart, Germany.
- 133
 Albrecht, J. 1961. Infektionsgefahrung im tuberkulose laboratorium. *Tuberk. Arzteblatt* 58:563-566.
- 134
 Albrecht, J. 1963. Laboratory infections and female laboratory personnel. *Deut. Arzteblatt* 60:1775-1776.
- 135
 Allen, A.M.; Kinard, R.F. 1958. Primary cutaneous inoculation tuberculosis in the *Macaca mulatta* monkey. *Amer. J. Pathol.* 34:337-347.
- 136
 Ames, A.M.; Nungester, W.J. 1949. The initial distribution of air-borne bacteria in the host. *J. Infect. Dis.* 84:56-63.
- 137
 Anderson, R.E.; Stein, L.; Moss, M.L.; Gross, N.H. 1952. Potential infectious hazards of common bacteriological techniques. *J. Bacteriol.* 64:473-481.
- 138
 Annotation. 1947. Brucella infection in the laboratory workers. *Brit. Med. J.* 2:780-781.
- 139
 Annotation. 1952. Danger from dried cultures and vaccines. *Lancet* 2:122.
- 140
 Annotation. 1956. Safety measures in the tuberculosis laboratory. *U.S. Navy Med. News Letter* 27:30-35. Also *A.M.A. Arch. Ind. Health* 13:522-524.
- 141
 Barbeito, M.S.; Alg, R.L.; Wedum, A.G. 1961. Infectious bacterial aerosol from dropped petri dish cultures. *Amer. J. Med. Technol.* 27:318-322.
- 142
 Beck, W.C. 1960. Editorial: Holes in rubber gloves. *Amer. J. Surg.* 100:363-364.
- 143
 Bedson, S.P. 1940. Virus diseases acquired from animals. *Lancet* 2:577-579.
- 144
 Bentzen, O. 1947. Investigation into infection by air and dust in bacteriological laboratories. *Acta Pathol. Microbiol. Scand.* 24:401-411.
- 145
 Bloom, B. 1960. The hazard of orally pipetting tritium oxide. *J. Lab. Clin. Med.* 55:164.
- 146
 Blowers, R.; Puckvin, J. 1962. Disposable bedpans. A study of a possible bacteriological hazard. *Monthly Bull. Min. Health, Public Health Lab. Serv.* 21:235-236.
- 147
 Bogen, E. 1959. Post-mortem transmission of tuberculosis. *Amer. J. Clin. Pathol.* 31:343-344.
- 148
 Bogen, E.; Dunn, W. 1941. Tubercle bacilli in air and dust. *Amer. Rev. Tuberc.* 43:435-437.
- 149
 Brown, J.H.; Cook, K.M.; Ney, F.G.; Hatch, T. Influence of particle size upon the retention of particulate matter in the human lung. *Amer. J. Public Health* 40:450-458, 480, 1950.

150

Burke, H.E.; Mankiewicz, F.; Brewer, L.M. 1957. A study in routes of dissemination of air-borne particulate matter including tubercle bacilli. Trans. Amer. Clin. Climatol. Ass. 69: 89-97.

151

Castleman, R.A., Jr. 1931. The mechanism of the atomization of liquids. J. Res. Nat. Bur. Stand. 6:369.

152

Chatigny, M.A. 1961. Protection against infection in the microbiology laboratory, devices and procedures, p. 131-192. In Wayne W. Umbreit (ed.) Advances in applied microbiology, Vol. 3. Academic Press, New York.

153

Chope, H.D.; Smillie, W.G. 1956. Air-borne infections. J. Ind. Hyg. Toxicol. 18:780-791.

154

DallaValle, J.M.; Hollaender, A. 1940. A study of the role of ventilating systems in the transmission of bacteria. Public Health Rep. 55:1268-1272.

155

Darlow, H.M.; Pale, W.R. 1959. Infective hazards of water closets. Lancet 1:1196-1200.

156

Dekkinga, F. 1954. Het sputumpraeparaat als bron van den besmettelijke aerosol. Ned. Tijdschr. Geneesk. 93:1626-1630.

157

Du Buy, H.; Arnold, F.A.; Olson, B.J. 1947. Studies on the air transmission of micro-organisms derived from the respiratory tract. Public Health Rep. 62:1391-1413.

158

Duguid, J.P. 1945. The number and the sites of origin of the droplets expelled during expiratory activities. Edinburgh Med. J. 52:385.

159

Duguid, J.P. 1946. The size and the duration of air-carriage of respiratory droplets and nuclei. J. Hyg. 44:741.

160

Duguid, J.P. 1946. Expulsion of pathogenic organisms from the respiratory tract. Brit. Med. J. 1:265-268.

161

Duguid, J.P.; Wallace, A.T. 1948. Air infection with dust liberated from clothing. Lancet 2:845-849.

162

Editorial. 1950. Hazards of diagnostic procedures in infectious diseases. New Engl. J. Med. 242:106-107.

163

Engbaek, C. 1953. Technique and practical problems: Precautions against infection of personnel working in the laboratories. Scand. J. Clin. Lab. Invest. 5:198.

164

Epstein, S.S. 1958. An intra-cranial inoculation technique for the production of experimental pneumonia in mice. J. Hyg. 56:73-79.

165

Espana, C.; Hammon, W.McD. 1948. Improved benzene extracted complement-fixing antigen applied to diagnosis of arthropod-borne virus encephalitides. J. Immunol. 59:31-44.

166

Evans, A.S. 1955. Pathogenicity and immunology of Newcastle disease virus (NVD) in man. Amer. J. Public Health 45:742-745.

167

Fish, C.H.; Spendlove, G.A. 1950. Safety measures in a tuberculosis laboratory. Public Health Rep. 65: 466-467.

168

Gellis, S.S. 1951. Viral hepatitis: An occupational hazard to medical technologists. Amer. J. Med. Technol. 17: 293-297.

169

Gibson, J. 1955. Safety in a tuberculosis laboratory. Med. Technician's Bull., Suppl. U.S. Armed Forces Med. J. 5:181.

170

Bordon, J.E.; Ingalls, T.H. 1957. Contact and air-borne transmission of infectious agents. Amer. J. Med. Sci. 233:334-357.

171

Gray, D.F.; Mattinson, M.W. 1952. Detection of small numbers of tubercle bacilli from dispersed cultures, using mice, guinea pigs, and artificial media. Amer. Rev. Tuberc. 65:572-588.

172

Green, H.L.; Lane, W.R. 1957. Particulate clouds: Dusts, smokes, and mists. Van Nostrand Co., Inc., Princeton, New Jersey. 424 p.

173

Guld, J.; Rud, C. 1953. Measurements of leakage of tuberculin syringes. Brit. Med. J. 1:368-370.

174

Hambleton, A. 1957. Potential danger to laboratory workers of the trisodium borosilicate method in the diagnostic culture of tubercle bacilli. Amer. J. Med. Technol. 23:181-183.

175

Hamburger, M. 1947. Transfer of beta hemolytic streptococci by shaking hands. Amer. J. Med. 2:23-25.

176

Hamel, E., Jr.; Alg, R.L. 1955. Biological hazards of common laboratory procedures: II. The hypodermic syringe and needle. Amer. J. Med. Technol. 21:333-346.

177

Hopper, G.J. 1963. The influence of environment on the survival of airborne virus particles in the laboratory. Arch. Virusforsch. 13:64-71.

178

Hinton, W.A. 1947. Acute infectious hepatitis: A hazard for workers in blood testing laboratories. Public Health Lab. 5:2.

179

Hueper, W.C. 1961. Occupational cancers with special reference to occupational cancer hazards to laboratory personnel. Amer. J. Med. Technol. 27:157-164.

180

Huppert, M. 1957. A technique for the safe handling of Coccidioides immitis cultures. J. Lab. Clin. Med. 50:158-164.

181

Hurst, V.; Grossman, M.; Ingram, F.R.; Lowe, A.E. 1958. Hospital laundry and refuse chutes as source of staphylococcal cross-infection. J. Amer. Med. Ass. 167:1223-1229.

182

Ignatovich, V.F. 1959. A contribution to the question of the retention of Rickettsia burnetii on objects of the external environment. Zh. Mikrobiol. Epidemiol. Immunobiol. (Transl.) 29:235-238.

183

Ingram, W.T. 1951. The drinking fountains and possible disease hazards. Mod. Sanit. 3:53.

184

Jacobson, G.; Hoyt, D.D.; Bogen, E. 1957. Tuberculosis in hospital employees. Dis. Chest 32:27-39.

185

Jemski, J.V.; Phillips, G.B. 1963. Microbiological safety equipment. Lab. Animal Care 13:2-12.

186

Jennison, M.W. 1942. Atomizing of mouth and nose secretions into the air as revealed by high-speed photography. Aerobiology, Amer. Ass. Advan. Sci. 17:106-128.

187

Johansson, K.R.; Ferris, D.H. 1946. Photography of airborne particles during bacteriological plating operations. *J. Infect. Dis.* 78:238-252.

188

Keller, R. 1958. Passage of bacteriophage particles through intact skin of mice. *Science* 128:718-719.

189

Kruse, R.H. 1963. Potential aerogenic laboratory hazards of Coccidioides immitis. *Amer. J. Clin. Pathol.* 37:150-158.

190

Kuh, C.; Ward, W.E. 1950. Occupational virus hepatitis: Apparent hazard for medical personnel. *J. Amer. Med. Ass.* 143:631-635.

191

Kundsinn, R.B.; Walter, C.W. 1961. The bacteriology of surgical gloves from 200 operations. *Bacteriol. Proc.* 61:127.

192

Lind, A. 1958. Danger of TB infection to personnel in pathological laboratories. *Trans. NAPT Commonwealth Chest Conf. Nat. Ass. Prevent. Tuberc.* Tavistock House North, Tavistock Square, London, W.C.1., England.

193

Löffler, W.; Mooser, H. 1942. Mode of transmission of typhus fever: Study based on infection of a group of laboratory workers. *Schweiz. Med. Wochensch.* 72:755-761.

194

Long, E.R. 1951. The hazard of acquiring tuberculosis in the laboratory. *Amer. J. Public Health* 41:782-787.

195

Looney, J.M.; Stein, T. 1950. Hazards and precautions in laboratory diagnosis of Coccidioides immitis. *New Engl. J. Med.* 242:77-82.

196

Mack, W.N. 1958. Aerosol contamination by drinking fountains. *The Sanitarian*, Jan-Feb:4.

197

Mallmann, W.L.; Fontes, A.K. 1955. Bacteriological study of drinking fountains. *J. Amer. Water Works Ass.* 47:235.

198

McCollum, R.W. 1962. Armed Forces Epidemiological Board: A reappraisal of viral hepatitis in chimpanzees. *Mil. Med.*, Dec:894-996.

199

Meade, G.M. 1948. The prevention of primary tuberculosis in medical students. *Amer. Rev. Tuberc.* 58:675-683.

200

Meade, G.M.; Steeken, W., Jr. 1949. Viability of tubercle bacilli in embalmed human lung tissue. *Amer. Rev. Tuberc.* 59:429-437.

201

Mehl, J. 1962. Les risques professionnels du personnel hospitalier et leur réparation. *Arch. Maladies Prof.* 7-8:487-492.

202

Merger, C. 1957. Hazards associated with the handling of pathogenic bacteria. *Can. J. Med. Technol.* 18:122-125.

203

Meyers, C.E.; Hresko, J.; Zippin, C.; Coppoletta, J.; Wolocho, W. 1963. Recovery of aerosolized bacteria from humans. *Arch. Environ. Health* 6:643-648.

204

Morris, E.J. 1960. A survey of safety precautions in the microbiological laboratory. *J. Med. Lab. Technol.* 17:70-81.

205

Morris, S.J. 1946. Tuberculosis as an occupational hazard during medical training. *Amer. Rev. Tuberc.* 54:140-158.

206

Morton, H.E. 1930. The survival of microorganisms in fixed and stained preparations. Amer. J. Clin. Pathol. 9:68-70.

207

Oliphant, J.W.; Gordon, D.A.; Mees, A.; Parker, R.R. 1949. Q-fever in laundry workers presumably transmitted from contaminated clothing. Amer. J. Hyg. 49: 76-82.

208

Paine, T.F. 1946. Illness in man following inhalation of Serratia marcescens. J. Infect. Dis. 79:226-232.

209

Paneth, L. 1915. Zur verhütung von laboratoriumsinfektionen. Med. Klin. 11:1398-1399.

210

Perkins, J.E.; Gilcreas, F.W.; Holloender, A.; Langmuir, A.D.; Robertson, C.H.; Wells, W.F.; Wheatley, G.M.; Yaglou, C.P. 1947. Committee Report: The Present status of the control of air-borne infections. Amer. J. Public Health 37: 13-22.

211

Phillips, G.B. 1960. Laboratory hazards in health laboratories. World Health Organ. Seminar Public Health Lab., Manila, December 1960.

212

Phillips, G.B.; Novak, F.E.; Hanel, E., Jr. 1955. Germicidal effectiveness of formaldehyde fixatives and preservations against Bacillus anthracis in animal tissue. Amer. J. Med. Technol. 21: 81-91.

213

Phillips, G.B.; Reitman, M. 1956. Biological hazards of common laboratory procedures: IV. The inoculating loop. Amer. J. Med. Technol. 22:16-17.

214

Pike, R.M.; Sulkin, S.E. 1952. Occupational hazards in microbiology. Sci. Monthly 75:222-228.

215

Pistocco, L.R.; Bowers, G.M. 1962. Demonstration of an aerosol produced by the air-water spray and air-turbine handpiece. U.S. Navy Med. News Letter 40:24-25.

216

Raphael, S.S.; Schwarz, J. 1954. Occupational hazards from fungi causing deep mycosis. A.M.A. Arch. Ind. Hyg. 8:154-156.

217

Reber, H.; Koenig, M.; Zinkernagel, R. 1962. Problems of laundry disinfection: I. Sterilization. Pathol. Microbiol. (Basel) 25:547-561.

218

Reitman, M. 1956. Laboratory hazards. Amer. J. Med. Technol. 22:12-13.

219

Reitman, M.; Alg, R.L.; Miller, W.S.; Gross, N.H. 1954. Potential infectious hazards of laboratory techniques: III. Viral techniques. J. Bacteriol. 68:549-554.

220

Reitman, M.; Frank, M.A., Sr.; Alg, R.L.; Wedum, A.G. 1953. Infectious hazards of the high speed blender and their elimination by a new design. Appl. Microbiol. 1:14-17.

221

Reitman, M.; Moss, M.L.; Harstad, J.B.; Alg, R.L.; Gross, N.H. 1954. Potential infectious hazards of laboratory techniques: I. Lyophilization. J. Bacteriol. 68:541-544.

222

Reitman, M.; Moss, M.L.; Harstad, J.B.; Alg, R.L.; Gross, N.H. Potential infectious hazards of laboratory techniques: II. The handling of lyophilized cultures. J. Bacteriol. 68:545-548, 1954.

223

Reitman, M.; Phillips, G.B. 1955. Biological hazards of common laboratory procedures: I. The pipette. Amer. J. Med. Technol. 21:338-342.

224

Reitman, M.; Phillips, G.B. 1956. Biological hazards of common laboratory procedures: III. The centrifuge. Amer. J. Med. Technol. 22:14-16.

225

Reitman, M.; Sutton, L.S.; Alg, R.L.; Miller, M.S.; Gross, N.H. 1955. Agglutinins in the sera of laboratory workers exposed to *Serratia marcescens*. Proc. Soc. Exp. Biol. Med. 89:235-240.

226

Reitman, M.; Wedum, A.G. 1956. Microbiological safety. Public Health Rep. 71:659-665.

227

Riley, R.L. 1957. Aerial dissemination of pulmonary tuberculosis. Amer. Rev. Tuberc. Pulmonary Dis. 76:931-941.

228

Roark, K.T. 1961. A study of the presence of viable tubercle bacilli on vials and in sputum specimens submitted in the laboratory in 5% phenol. Public Health Lab. 19:88-92.

229

Rosebury, T. 1948. Experimental airborne infection. The Williams and Wilkins Company, Baltimore, Maryland. 222 p.

230

Rosenthal, S.R.; Elmore, F.H. 1950. Studies on the contagiousness of coccidioidomycosis. Amer. Rev. Tuberc. 61:106-115.

231

Rosenthal, S.R.; Routien, J.B. 1946. The infectiousness of coccidioidomycosis. Science 104:479.

232

Sandiford, P.F.; Clayton, H.R.; Marks, J.; Mair, N.B.; Robinson, D.F.; Payne, D.J.H.; Hughes, K.E.A.; Robertson, L.; Henderson, R.J.; Tomlinson, A.J.H. 1962. The excretion of tubercle bacilli by experimentally infected guinea pigs. Report of a working party of the Public Health Laboratory Service. Monthly Bull. Min. Health, Public Health Lab. Serv. 21:228-234.

233

Saxholm, R. 1954. Experiments with a new culture method for tubercle bacilli. Amer. Rev. Tuberc. 69:304-306.

234

Saxholm, R. 1955. Further experiments with combinations of pancreatin and quaternary ammonium compounds for cultivation of *Mycobacterium tuberculosis*. Amer. Rev. Tuberc. Pulmonary Dis. 72:98-106.

235

Schnurrenberger, P.R.; Tjalma, R.A.; Stegmiller, H.E.; Wentrowth, F.H. 1961. Bovine leptospirosis: A hazard to man. J. Amer. Vet. Med. Ass. 139:884-888.

236

Slepishkin, A.N. 1959. Epidemiological study of a laboratory infection with the Venezuelan encephalomyelitis virus. Vopr. Virusol. 4:311-314.

237

Sloan, R.A. 1942. Dissemination of tubercle bacilli from fresh autopsy material. N.Y. State J. Med. 42:133-134.

238

Smadel, J.E. 1951. The hazard of acquiring virus and rickettsial diseases in the laboratory. Amer. J. Public Health 41:788-795.

239

Smith, C.E. 1950. The hazard of acquiring mycotic infections in the laboratory. Epidemiol. Lab. Sect., Amer. Public Health Ass. Meeting, St. Louis, Mo., November 2, 1950.

240

Smith, C.E. 1942. Parallelism of coccidioidal and tuberculous infections. Radiology 38:643-648.

241

Smith, G.S. 1953. Tuberculosis as a necropsy room hazard. Clin. Pathol. 6:132-134.

242

Stein, C.D.; Rogers, H. 1946. Recovery of viable anthrax spores from vapors of heated anthrax spore suspensions and from the distillate from anthrax spore suspensions. *Amer. J. Vet. Res.* 7:481-485.

243

Stein, C.D.; Rogers, H. 1950. Recovery of viable microorganisms and viruses from vapors removed from frozen suspensions of biological material during lyophilization. *Amer. J. Vet. Res.* 11: 339-344.

244

Stevens, R.E., Jr. 1963. Preliminary study: Air contamination with microorganisms during use of turbine handpieces. *Amer. Dental Ass.* 66:237-239.

245

Stoker, M.G.P. 1957. Q-fever down the drain. *Brit. Med. J.* 1:425-427.

246

Stout, W.J. 1962. How to keep staphylococci off the telephone. *Mod. Hosp.* 99:104.

247

Svoboda, O.; Cupak, M. 1962. Occupational diseases and accidents among veterinarians. *Pract. Lekarsk.* 14: 284-288 (Czech.).

248

Thomas, W.D. 1960. Virus escape through institute ventilators, p. 15. *Daily Telegraph and Morning Post* (London), Friday, 4 March 1960.

249

Thurn, O. 1914. Ueber die lebensfähigkeit an objektträgern angetrockneter ungefärbter und gefärbter bakterien. *Zentralbl. Bakteriol. Parasitenk. Abt. I. Orig.* 74:81-90.

250

Tomlinson, A.J.H. 1957. Infected air-borne particles liberated on opening screw-capped bottles. *Brit. Med. J.* 2:15-17.

251

Trumbull, M.L.; Greiner, D.J. 1951. Homologous serum jaundice; an occupational hazard for medical personnel. *J. Amer. Med. Ass.* 145: 965-967.

252

Tuberculosis in laboratory workers. *J. Amer. Med. Ass.* 143:478, 1950.

253

Unsel, D.W. 1962. Toxoplasmosis as an occupational disease. *Med. Weltlit.* 48:2564-2566.

254

Wade, H.W. 1949. Hazard of laboratory infection with leprosy. *J. Amer. Med. Ass.* 140:1113.

255

Walter, W.G. 1955. Symposium on methods for determining bacterial contamination on surfaces. *Bacteriol. Rev.* 19: 284-287.

256

Washington News: Tuberculosis in laboratory workers. *J. Amer. Med. Ass.* 143: 478, 1950.

257

Wedum, A.G. 1953. Bacteriological safety. *Amer. J. Public Health* 43: 1128-1137.

258

Wedum, A.G. 1957. Health hazards in laboratories and research areas. *Safety Monographs Coll. Univ.* 7:15-20. National Safety Council, 425 Michigan Ave., Chicago 11, Ill.

259

Wedum, A.G. 1961. Control of laboratory air-borne infection. *Bacteriol. Rev.* 25:210-216.

260

Wedum, A.G. 1964. Laboratory safety in research with infectious aerosols. *Public Health Rep.* 79:619-633.

261

Weed, L.A.; Baggenstoss, A.H. 1952.
Isolation of pathogens from embalmed
human bodies. Amer. J. Clin. Pathol.
21:1114-1120.

262

Wellbrook, C.E.; Parker, D.M. 1960.
Breeze and offal carries Q-fever.
Public Health Rep. 76:152-153.

263

Whitwell, F.; Taylor, P.J.; Cliver, A.J.
1957. Hazards to laboratory staff in
centrifuging screw-capped containers.
J. Clin. Pathol. 10:88-91.

IV. SAFETY AND ANIMAL CARE

A. ANIMAL CARE AND HAZARDS

- 4
Grams, G.D.; Bishop, J.E.; Appleton, D.; French, A.J. 1960. Development of a laboratory for germfree research in the department of pathology. Univ. Mich. Bull. 26:165-175.
- 55
Ellen, A.M.; Kinard, R.F. 1958. Primary cutaneous inoculation tuberculosis in the Macaca mulatta monkey. Amer. J. Pathol. 34:337-347.
- 56
Animal Care Panel, Animal Facilities Standards Committee. 1963. Guide for laboratory animal facilities and care. Public Health Service Publication 1024. U.S. Government Printing Office, Washington, D.C. 33 p.
- 67
Anthony, A. 1963. Criteria for acoustics in animal housing. Lab. Animal Care 13:340-347.
- 68
Ash, G.W. 1960. A progress report on the Alderley Park breeding unit. J. Animal Technician's Ass. 11:10.
- 69
Pearcroft, W.G. 1963. Hepatitis in African monkeys. Nature 197:806-807.
- 270
Benson, R.E.; Fremming, B.D.; Young, R.J. 1954. Care and management of chimpanzees at the radiological laboratory at the University of Texas and the United States Air Force. Proc. Animal Care Panel 5th Annu. Meeting:27-36.
- 271
Blinnikov, K.S. 1960. Latent viruses in rhesus monkeys. Vopr. Virusol. 5:701-704.
- 272
Carithers, H.A. 1963. Hazards to health: Animals and accidents. New Engl. J. Med. 269:361-362.
- 273
Chappel, W. 1960. Animal infectivity of aerosols of monkey B virus. Ann. N.Y. Acad. Sci. 85:911-914.
- 274
Cobbett, L. 1936. The type of tuberculosis bacillus found in tuberculosis of the cat. J. Comp. Pathol. Therapy 49: 142-148.
- 275
Darlow, H.M.; Bale, W.R.; Carter, G.B. 1961. Infection of mice by the respiratory route with Salmonella typhimurium. J. Hyg. 59:303-308.
- 276
Davis, D.E.; Delaplane, J.P. 1955. Ornithosis in turkeys, p. 296-301. Proc. Book, Amer. Vet. Med. Ass.
- 277
DeLay, P.D.; DeOme, K.B.; Bankowski, R.A. 1948. Recovery of pneumoencephalitis (Newcastle) virus from the air of poultry houses containing infected birds. Science 107:474-475.
- 278
Delowry, W.C.; Frank, M.H.; Cox, G.E.; Hesse, A.L. 1958. Detection of pulmonary tuberculosis in laboratory monkeys by chest radiography. Amer. J. Vet. Res. 19:225-229.
- 279
Dunne, H.W.; Reice, C.V.; Hokanson, J.F.; Lindstrom, E.S. 1955. Variations in the virus of hog cholera, p. 148-153. Proc. Book, Amer. Vet. Med. Ass.
- 280
Fahy, A. 1957. Of monkeys and men. Bull. Nat. Tuberc. Ass. 48:29-30.
- 281
Faine, S.; Kaipainen, W.J. 1955. Erythromycin in experimental leptospirosis. J. Infect. Dis. 97:146-151.

282

Fisher, L.E. 1951. Disease problems and handling of laboratory primates, p. 18-25. Proc. Animal Care Panel 2nd Annu. Meeting, Nov. 29-30, 1951.

283

Fremming, B.D.; Benson, R.E.; Young, R.J.; Nye, R.E.; Smith, W.E. 1955. Maintenance of a colony of tuberculous monkeys, p. 219-222. Proc. Book, Amer. Vet. Med. Ass.

284

Hanson, R.P.; Brandly, C.A. 1957. Epizootiology of vesicular stomatitis. Amer. J. Public Health 47:205-209.

285

Harding, H.B.; Cohen, B.J. 1951. An isolation program for monkeys; epidemiological and physical aspects, p. 26-35. Proc. Animal Care Panel 2nd Annu. Meeting, Nov. 29-30, 1951.

286

Hoffert, W.R.; Bates, M.E.; Cheever, F.S. 1958. Study of enteric viruses of simian origin. Amer. J. Hyg. 68: 15-20.

287

Holtbrook, A.A.; Brewer, N.R. 1963. Planning and equipping animal operating facilities. Lab. Animal Care 13:424-430.

288

Holden, P.; Solomon, G.C.; Blackmore, J.S. 1960. Use of chicks for detecting Western equine and St. Louis encephalitis viruses in mosquitoes. Amer. J. Vet. Res. 21:1078-1083.

289

Hoyland, F. 1957. The care and use of guinea pigs in a Public Health laboratory. J. Animal Technician's Ass. 8: 20-23.

290

Hull, R.N.; Nash, J.C. 1960. Immunization against B virus infection: Preparation of experimental vaccine. Amer. J. Hyg. 71:15-28.

291

Hull, R.N.; Minner, J.R.; Mascoli, C.C. 1958. New viral agents recovered from tissue cultures of monkey kidney cells: III. Recovery of additional agents both from cultures of monkey tissues and directly from tissues and excreta. Amer. J. Hyg. 68:31-44.

292

Hull, R.N.; Peck, F.B., Jr.; Ward, T.G.; Nash, J.C. 1962. Immunization against B virus infection: II. Further laboratory and clinical studies with an experimental vaccine. Amer. J. Hyg. 76:239-251.

293

Hull, R.N.; Minner, J.R.; Smith, J.W. 1956. New viral agents recovered from tissue cultures of monkey kidney cells: I. Origin and properties of cytopathogenic agents S.V.1, S.V.2, S.V.4, S.V.5, S.V.8, S.V.11, S.V.12, and S.V.15. Amer. J. Hyg. 63:204-215.

294

Institute of Laboratory Animal Resources, Committee on the Animal Facilities Survey. May 1962. Animal facilities in medical research. Nat. Acad. Sci., Wash., D.C. 53 p.

295

Institute of Laboratory Animal Resources. 1961. Guide for shipment of small laboratory animals. Publication 846, Printing and Publishing Office, Nat. Acad. Sci., Washington, D.C.

296

Institute of Laboratory Animal Resources. 1962. Recommended minimum standards for the shipment of laboratory primates. Publication 971, Printing and Publishing Office, Nat. Acad. Sci., Washington, D.C.

297

Jemski, J.V. 1962. Maintenance of monkeys experimentally infected with organisms pathogenic for man. Proc. Animal Care Panel 12:89-98.

298

Jemski, J.V.; Kirchheimer, W.F.; Phillips, G.B.; Maire, L.F. 1958. Tuberculin testing of monkeys experimentally infected with aerosols of tubercle bacilli. *Bacteriol. Proc.*, p. 79.

299

Jemski, J.V.; Phillips, G.B. 1963. Microbiological safety equipment. *Lab. Animal Care* 13:2-12.

300

Jemski, J.V.; Phillips, G.B. 1964. Aerosol challenge of animals, p. 273-341. In W.I. Gay (ed.) *Methods in animal experimentation*. Academic Press, Inc., N.Y.

301

Johnson, B.H.; Davis, F.; Jamison, R.W.; Marti, W.J. 1953. Viability and chemotherapeutic sensitivity of tubercle bacilli isolated from pulmonary and other lesions in embalmed bodies at autopsy. *Dis. Chest* 23:686-692.

302

Keeble, S.A. 1960. B virus infections in monkeys. *Ann. N.Y. Acad. Sci.* 85: 960-969.

303

Kennard, M.A.; Ruch, J.R.; Fulton, J.K. 1946. The housing, care, and surgical handling of laboratory primates. *Yale J. Biol. Med.* 18:443-471.

304

Kennard, M.A.; Schroder, C.R.; Trask, J.D.; Paul, J.R. 1939. A cutaneous test for tuberculosis in primates. *Science* 89:442-443.

305

Kinard, R.; McPherson, C.W. 1960. The use of trichloroethylene and halothane anesthesia in the restraint of laboratory primates. *Amer. J. Vet. Res.* 21: 385-388.

306

Kirchheimer, W.F. 1960. Safe handling of animals in a biological laboratory. *Nat. Safety Council Trans.* 5:43-45.

307

Kirchheimer, W.F.; Hess, A.R.; Williston, E.H. 1950. Isolation of tubercle bacilli from the feces and gastric contents of intravenously infected mice. *Amer. Rev. Tuberc.* 62:481-483.

308

Klein, F.; Hodges, D.R.; Mahland, B.G.; Jones, W.I.; Haines, B.W.; and Lincoln, R.E. 1962. Anthrax toxin: Causative agent in death of rhesus monkeys. *Science* 138:1331-1333.

309

Madin, S.H. 1954. Preliminary studies on the prophylactic value of type A vesicular exanthema immune serum. *J. Amer. Vet. Med. Ass.* 125:47-49.

310

McKercher, D.G.; Moulton, J.E.; Madin, S.H.; Kendrick, J.W. 1957. Infectious bovine rhinotracheitis - a newly recognized virus disease of cattle. *Amer. J. Vet. Res.* 67:246-256.

311

Melnick, J.L. 1956. The recovery of poliomyelitis virus from the stools of experimentally infected monkeys and chimpanzees. *J. Immunol.* 53:277-290.

312

Meyer, K.F.; Eddie, B. Disease problems in guinea pigs, p. 23-40. *Proc. Animal Care Panel 3rd Annu. Meeting*, Dec. 3-4, 1952.

313

Pereira, W.P. 1952. Housing and management of experimental animals. *J. Animal Technician's Ass.* 3:49-52.

314

Perkins, F.T.; Short, D.J. 1957. A new technique in the sterilization of animal houses, racking, and cages. *Hosp. Engr.* 12:1-7.

315

Phillips, G.B.; Jemski, J.V. 1963. Safety in the animal laboratory. *Lab. Animal Care* 13:13-20.

- 316
Phillips, G.B.; Novak, F.E.; Hanel, E., Jr. 1955. Germicidal effectiveness of formaldehyde fixatives and preservatives against Bacillus anthracis in animal tissue. *Amer. J. Med. Technol.* 21:89-91.
- 317
Pipher, W.V. 1963. Criteria for animal room design. *Lab. Animal Care* 13:251-257.
- 318
Radcliffe, H.L. 1954. Disease control and colony management of infra-human primates at the Philadelphia Zoological Garden, p. 8-15. *Proc. Animal Care Panel*, 5th Annu. Meeting.
- 319
Reber, E.F. 1956. Airborne transmissible gastroenteritis. *Amer. J. Vet. Res.* 17:194-195.
- 320
Rees, R.J.W. 1961. Precautions against tuberculosis infection in the animal house. *Lab. Animal Centre Collected Papers* 10:51-58.
- 321
Reyniers, J.A. 1964. Controlled environmental facility for maintaining closed animal quarters. *Lab. Animal Care* 14:134-154.
- 322
Rich, S.T.; Cohen, B.J. 1962. A restraint unit for large monkeys. *Proc. Animal Care Panel* 12:113-116.
- 323
Rickell, M. 1961. The care of baboons. *J. Animal Technician's Ass.* 12:60-62.
- 324
Rosenthal, S.R.; Routien, J.B. 1947. Contagiousness of coccidioidomycosis. *Arch. Internal Med.* 80:343.
- 325
Rowe, W.P.; Hartley, J.W.; Capps, W.I. 1963. Mouse hepatitis virus infection as a highly contagious, prevalent, enteric infection of mice. *Proc. Soc. Exp. Biol. Med.* 112:161-165.
- 326
Sandiford, B.R.; Clayton, H.R.; Marks, J.; Mair, N.S.; Robinson, L.T.; Payne, D.J.H.; Hughes, K.E.A.; Robertson, L.; Henderson, R.J.; Tomlinson, A.J.E. 1962. The excretion of tubercle bacilli by experimentally infected guinea pigs. Report of a working party of the Public Health Laboratory Service. *Monthly Bull. Min. Health, Public Health Lab. Serv.* 21:228-234.
- 327
Schroeder, C.R. 1938. A diagnostic test for the recognition of tuberculosis in primates; a preliminary report. *Zoologica* 23:397-400.
- 328
Schwarz, J.; Bingham, E.; Robbins, E.S.; Adreano, S.M. 1955. Experimental histoplasmosis in mice, and pregnancy. *J. Infect. Dis.* 97:160-161.
- 329
Sewall, H.; Lurie, M.B. 1924. Spontaneous tuberculosis in guinea pigs exposed to breath-polluted air. *Amer. Rev. Tuberc.* 9:525-533.
- 330
Short, D.J. 1954. Methods used for maintenance of laboratory animals by the National Institute for Medical Research, Mill Hill, London, England, p. 127-134. *Proc. Animal Care Panel* 5th Annu. Meeting.
- 331
Slanetz, C.A. 1948. The control of salmonella infection in colonies of mice. *J. Bacteriol.* 56:771-775.
- 332
Sloan, R.A. 1942. Dissemination of tubercle bacilli from fresh autopsy material. *N.Y. State J. Med.* 42:133-134.
- 333
Smadel, J.E. 1951. The hazard of acquiring virus and rickettsial diseases in the laboratory. *Amer. J. Public Health* 41:788-794.

334

Smith, J.K. 1954. Problems relating to housing and care of animals in an industrial research laboratory, p. 146-150. Proc. Animal Care Panel 5th Annu. Meeting.

335

Scove, O.A. 1963. Diagnosis and control of common diseases of hamsters, rabbits, and monkeys. J. Amer. Vet. Ass. 142:285-290.

336

Southwood, A.R. 1954. Zoonoses in Australia: A conspectus of some clinical and preventive aspects. Amer. J. Public Health 44:1402-1410.

337

Spencer, R.R.; Parker, R.R. 1930. Studies on Rocky Mountain spotted fever. U.S. Public Health Serv. Hyg. Lab. Bull. 154. 116 p.

338

Stone, W.G. 1962. Management practices in a normal monkey colony. Proc. Animal Care Panel 12:99-106.

339

Symposium on laboratory animals: Their care and their facilities. J. Med. Educ. 35:1-55, 1960.

340

Symposium: Care and use of laboratory animals. Federation Proc. 20:901-920, 1961.

341

Tuffery, A.A. 1958. Animal house hygiene. J. Animal Technician's Ass. 9: 36-39.

342

Tuffery, A.A. 1958. Vaccination in the control of ectromelia in mouse colonies. Lab. Practice 7:412-415.

343

Valenstein, F.S. 1961. A note on anesthetizing rats and guinea pigs. J. Exp. Animal Behavior 4:6.

344

Van den Berghe, L.; Janssen, P. 1956. A new disease of the chimpanzee. Folia Sci. Africae Central. 2:22.

345

Weiss, C. 1958. Care of guinea pigs used in clinical and research laboratories. Amer. J. Clin. Pathol. 29: 49-53.

346

Wellbrook, C.E.; Parker, I.M. 1960. Breeze from offal carries Q fever. Public Health Rep. 76:152-153.

347

Wood, W.; Shimada, F.T. 1954. Isolation of strains of virus B from tissue cultures of cynomolgus and rhesus kidney. Can. J. Public Health 45:509-518.

348

Wright, J.F. 1959. Treatment of captive wild animals using an automatic projectile type syringe. Vet. Med. 54: 32-33.

B. INFECTIONS DUE TO HANDLING ANIMALS

349

Anderson, S.G. 1946. A note on two laboratory infections with the virus of Newcastle disease of fowls. Med. J. Australia 1:371.

350

Anonymous. 1961. Infective hepatitis and chimpanzees. Brit. Med. J. 2:1206.

351

Bogen, E. 1959. Postmortem transmission of tuberculosis. Amer. J. Clin. Pathol. 31:343-344.

352

Borgen, L.O. 1948. Infection with Actinomyces muris ratt after a rat bite. Acta Pathol. Microbiol. Scand. 25:161-166.

353

Brown, T.M.P.; Nisumaker, J.C. 1961. Rat bite fever: A review of American cases. Bull. Johns Hopkins Hosp. 70:201-327.

354

Burnet, F.M. 1943. Human infection with the virus of Newcastle disease of fowls. *Med. J. Australia* 2:313-314.

355

Burnet, F.M.; Freeman, M. 1939. Note on a series of laboratory infections with the rickettsias of Q fever. *Med. J. Australia* 1:11-12.

356

Coghlan, J.D.; Norval, J.; Seiler, H.E. 1957. Canicola fever in man through contact with infected pigs. *Brit. Med. J.* 1:257-261.

357

Commission on Acute Respiratory Disease, Ft. Bragg, North Carolina. 1947. A laboratory outbreak of Q fever caused by the Balkan grippé strain of Rickettsia burnetii. *Amer. J. Public Health* 37: 431-440.

358

Constantine, D.G. 1962. Rabies transmission by nonbite route. *Public Health Rep.* 77:287-289.

359

Davidson, W.L.; Hummeler, K. 1960. B virus infection in man. *Ann. N.Y. Acad. Sci.* 85:970-979.

360

DeKoch, G.; LeRoux, J. 1956. Studies on tuberculosis in dogs and a case of human tuberculosis contracted from a dog. *Onderstepoort J. Vet. Res.* 27: 227-238.

361

Eyles, D.E.; Coatney, G.R.; Getz, M.E. 1960. Vivax-type malaria parasite of macaques transmissible to man. *Science* 131:1812-1813.

362

Francis, T. 1935. Recent advances in the study of influenza. *J. Amer. Med. Ass.* 105:251-254.

363

Francis, T., Jr.; Magill, T.P. 1935. Rift Valley fever: A report of three cases of laboratory infections and the experimental transmission of the disease to ferrets. *J. Exp. Med.* 62:433-448.

364

Galuzo, I.G. 1963. Animal toxoplasmosis as a source of human infection. *Zdravookhr. Kazakhsk.* 23:65-67.

365

Girolami, M. 1962. Animal diseases transmissible to man. *Arch. Italian Sci. Med. Trop.* 43:441-476.

366

Gustafson, D.P.; Moses, H.E. 1951. Isolation of Newcastle disease virus from the eye of a human being. *J. Amer. Vet. Med. Ass.* 118:1-2.

367

Hanson, R.P.; Rasmussen, A.F.; Brandly, C.A.; Brown, J.W. 1950. Human infection with the virus vesicular stomatitis. *J. Lab. Clin. Med.* 36:756-758.

368

Held, J.R. 1962. Subhuman primates in the transmission of human hepatitis. 6th CDC Bien. Vet. Conf., Atlanta, Georgia, Aug. 1962.

369

Held, J.R. 1963. The public health implications of non-human primates in the transmission of hepatitis in man. *Sci. Proc. Amer. Vet. Med. Ass. Annu. Meeting*, 100:183-185.

370

Heppleston, A.G. 1949. Quantitative air-borne tuberculosis in rabbits, the course of human type infection. *J. Exp. Med.* 89:597-609.

371

Heubner, R.J. 1947. Report of an outbreak of Q fever at National Institutes of Health. *Amer. J. Public Health* 37: 431-440.

372

Hillis, W.D. 1961. An outbreak of infectious hepatitis among chimpanzee handlers at a United States Air Force Base. *Amer. J. Hyg.* 73:316-328.

373

Howitt, B.F.; Bishop, L.K.; Kissling, R.E. 1948. Presence of neutralizing antibodies of Newcastle disease virus in human sera. *Amer. J. Public Health* 38:1263-1272.

374

Hull, T.G. 1955. Diseases transmissible from animals to man. 4th ed. Charles C. Thomas, Springfield, Illinois. 717 p.

375

Irons, J.V.; Sullivan, T.D.; Rowen, J. 1951. Outbreak of psittacosis (ornithosis) from working with turkeys or chickens. *Amer. J. Public Health* 41: 931-937.

376

Kathe, J.; Mochmann, H. 1962. Albino rat as a source of infection with Weil's Disease: Observations on rat survival and personnel of a research institute. *Monatsh. Vet.* 17:27-31.

377

Laidlow, P.P. 1935. Epidemic influenza: A virus disease. *Lancet* 1: 1118-1124.

378

Love, F.M.; Jungherr, E. 1962. Occupational infection with virus B of monkeys. *J. Amer. Med. Ass.* 179:804-806.

379

MacPherson, L.W. 1960. Bacterial infections of animals transmissible to man. *Amer. J. Med. Sci.* 239:347-362.

380

MacPherson, L.W. 1962. A study of enterovirus infections of animals transmissible to man. *Med. Serol. J. Can.* 18:483-484.

381

Manson-Bahr, P.E.C.; Southgate, B.A.; Harvey, A.E.C. 1963. Development of Kala-azar in man after inoculation with a *Leishmania* from a Kenya sand fly. *Brit. Med. J.* 1:1208-1210.

382

McCollum, R.W. 1962. Armed Forces Epidemiological Board, A reappraisal of viral hepatitis in chimpanzees. *Military Med.* 127:994-996.

383

McCoy, G.W. 1934. Psittacosis among the personnel of the Hygienic Laboratory. *J. Infect. Dis.* 55:156-157.

384

McCullough, N.B. 1963. Medical care following accidental infection of *Brucella abortus*, strain 19, in man. *J. Amer. Vet. Med. Ass.* 143:1617-1618.

385

McGilvray, C.D. 1944. The transmission of glanders from horse to man. *J. Amer. Med. Ass.* 104:255-261.

386

Metelkin, A.I. 1963. Zoonoses of laboratory animals and their danger to man. *Zh. Mikrobiol. Epidemiol. Immunol.* 5:113.

387

Meyer, K.F. 1932. A summary of recent studies on equine encephalomyelitis. *Ann. Intern. Med.* 6:644-654.

388

Meyer, K.F.; Eddie, B. 1947. The knowledge of human virus infections of animal origin. *J. Amer. Med. Ass.* 133: 822-828.

389

Meyer, K.F.; Eddie, B. 1942. Spontaneous ornithosis (psittacosis) in chickens the cause of a human infection. *Proc. Soc. Exp. Biol. Med.* 49:522-525.

390

Meyer, K.F.; Eddie, B.; Yanamura, H.Y. 1942. Ornithosis (psittacosis) in pigeons and its relation to human pneumonitis. *Proc. Soc. Exp. Biol. Med.* 49:609-615.

391

Mitchell, C.A. 1959. Animal viruses transmissible to man. *Amer. J. Med. Sci.* 237:359-366.

392

Morris, S.J. 1946. Tuberculosis as an occupational hazard during medical training. *Amer. Rev. Tuberc.* 54:140-158.

393

Nelson, C.B.; Pomeroy, B.S.; Schroll, K.; Park, W.E.; Lindeman, R.J. 1952. An outbreak of conjunctivitis due to Newcastle disease virus (NDV) occurring in poultry workers. *Amer. J. Public Health* 42:672-678.

394

Oliphant, J.W.; Parker, R.R. 1948. Q fever: Three cases of laboratory infections. *Public Health Rep.* 63:1364-1370.

395

Pierce, E.C.; Pierce, J.D.; Hall, R.N. 1958. B virus: Its current significance, description and diagnosis of fatal human infection. *Amer. J. Hyg.* 68:242-250.

396

Rewell, R.E. 1949. Outbreak of Shigella schmitzii infection in man and apes. *Lancet* 1:220-221.

397

Robbins, F.C.; Rustigan, R. 1946. Q fever in the Mediterranean area: Report of its occurrence in allied troops: IV. A laboratory outbreak. *Amer. J. Hyg.* 44:64-71.

398

Rowell, H.C. 1963. Mycotic infections of animals transmissible to man. *Amer. J. Med. Sci.* 245:333-344.

399

Rowell, H.C.; Kennedy, A.H.; Fischer, J.B. 1954. A dermatophyte infection in chinchillas transmitted to man. *Can. J. Public Health* 45:31.

400

Ruch, T.C. 1959. Diseases of laboratory primates. W.B. Saunders Co., Philadelphia, Pa. 600 p.

401

Sabin, A.B.; Ward, R. 1941. Poliomyelitis in a laboratory worker exposed to the virus. *Science* 94:113-114.

402

Sabin, A.B.; Wright, A.M. 1934. Acute ascending myelitis following a monkey bite, with the isolation of a virus capable of reproducing the disease. *J. Exp. Med.* 59:115-136.

403

Smadel, J.E.; Wall, M.J.; Gregg, A. 1943. An outbreak of psittacosis in pigeons, involving the production of inclusion bodies and transfer of the disease to man. *J. Exp. Med.* 78:189-203.

404

Smith, B.J.W.; Brown, H.E.; Derrick, E.H. 1939. A further series of laboratory infections with the rickettsia of Q fever. *Med. J. Australia* 1:12-13.

405

Smith, W.; Stuart-Harris, C.H. 1936. Influenza infection of man from the ferret. *Lancet* 2:121-123.

406

Staff of Communicable Disease Center. May 1963. Hepatitis surveillances: IV. Chimpanzee-associated infectious hepatitis. *Surveillance Rep.* 15.

407

Sulkin, S.E.; Pike, R.M. 1951. Survey of laboratory infections. *Amer. J. Public Health* 41:769-781.

408

Sussman, O. 1953. Animal diseases transmissible to man. *Amer. J. Public Health* 43:1423-1427.

409

Terry, L.L.; Lewis, J.L., Jr.; Sessions, S.M. 1950. Laboratory infection with Leishmania donovani: A case report. *Amer. J. Trop. Med.* 30:643-649.

410

Tobie, J.E.; Kuvin, S.F.; Contacos, P.G.; Coatney, G.R.; Evans, C.B. 1963. Cross reactions in human and simian malaria. *J. Amer. Med. Ass.* 184:945-947.

411

Toomey, N. 1931-1932. American mountain tick fever and spotted fever; comparative epidemiography. *Ann. Intern. Med.* 5:601-612.

412

Unsold, D.W. 1962. Toxoplasmosis as an occupational disease. *Med. Weltlit.* 48:2564-2566.

413

Ward, C.G.; Birge, J.P. 1952. Psittacosis (ornithosis) following contact with pheasants. *J. Amer. Med. Ass.* 150:217-219.

414

Weir, M.; Horsfall, F.L., Jr. 1940. The recovery from patients with acute pneumonitis of a virus causing pneumonia in the mongoose. *J. Exp. Med.* 72:595-610.

415

Wilbert, R. 1927. An infectious disease of chimpanzees transmissible to man. *Compt. Rend. Acad. Sci. Paris* 185:569-571.

416

Wilbert, R.; Delmorne, M.J. 1927. On an icterohemorrhagic spirochetose of chimpanzees transmissible to man. *Ann. Inst. Pasteur* 41:1139-1155.

417

Yatom, J. 1946. An outbreak of conjunctivitis in man associated with the virus of Newcastle disease. *Refuh. Vet. (Palestine)* 3:69-70.

C. ANIMAL ISOLATION EQUIPMENT

418

Anderson, A.C. 1962. Life-span studies on irradiated beagles: Practical and academic contributions. *Small Animal Clinician* 2:506-512.

419

Anderson, A.C. 1964. Air conditioned cages designed to minimize kennel problems. *Lab. Animal Care* 14:292-303.

420

Chatigny, M.A. 1961. Protection against infection in the microbiological laboratory, devices and procedures, p. 131-192. In Wayne W. Umbreit (ed.) *Advances in applied microbiology*, Vol. 7. Academic Press, New York.

421

Clark, E.M.W. 1960. A new unit for infected small animals. *J. Animal Technician's Ass.* 11:27-30.

422

Couling, C.W.; Rees, R.J.W. 1959. A protective cabinet for the postmortem examination of infected animals. *J. H.C.* 57:407-409.

423

Coulthard, C.E. 1949. Air conditioned room for experimental tuberculous animals. *Proc. Soc. Appl. Bacteriol.*, p. 66-68.

424

Decker, H.M.; Geile, F.A.; Harstad, J.B.; Gross, N.H. 1952. Spun glass air filters for bacteriological cabinets, animal cages, and shaking machine containers. *J. Bacteriol.* 63:377-383.

425

Dolowy, W.C. 1961. Medical research laboratory of the University of Illinois. *Proc. Animal Care Panel* 11:267-280.

426

Ganis, F.M. 1962. Convenient mouse and rat holder for use in various laboratory procedures. *J. Lab. Clin. Med.* 60:354-356.

427

Gremillion, G.G. 1959. The use of bacteria-tight cabinets in the infectious disease laboratory, p. 171-182. *Proc. 2nd Symp. Gnotobiotic Technol.*, Univ. of Notre Dame Press, Notre Dame, Ind.

428

Baelterman, E.O. 1956. Practical isolation equipment for baby pigs. *Amer. J. Vet. Res.* 17:129-131.

429

Hoeltge, E.J. 1961. Corrosion and the choice of metals for cage construction. *Proc. Animal Care Panel* 11:21-30.

430

Horsfall, F.L.; Bauer, J.H. 1940. Individual isolation of infected animals in a single room. *J. Bacteriol.* 40:569-580.

431

Jemski, J.V. 1962. Maintenance of monkeys experimentally infected with organisms pathogenic for man. *Proc. Animal Care Panel* 12:89-98.

432

Kraft, L.M. 1957. Studies on the etiology and transmission of epidemic diarrhea of infant mice. *J. Exp. Med.* 106:743-755.

433

Kraft, L.M. 1958. Observations on the control and natural history of epidemic diarrhea of infant mice. *Yale J. Biol. Med.* 31:121-137.

434

Landolt, R.E.; Peters, D.C.; Davenport, P. 1962. Device to facilitate restraint of laboratory animals. *Proc. Animal Care Panel* 12:121-124.

435

Lev, M. 1962. An autoclave plastic unit for rearing animals under germ-free conditions. *J. Appl. Bacteriol.* 25:30-34.

436

Levine, P.P.; Hofstad, M.S. 1947. Attempts to control air-borne infectious bronchitis and Newcastle disease of fowls with sterilamps. *Cornell Vet.* 37:204-210.

437

Lurie, M.B. 1944. The prevention of natural air-borne contagion of tuberculosis in rabbits by ultraviolet irradiation. *J. Exp. Med.* 79:559-572.

438

Phillips, G.B.; Reitman, M.; Mullican, C.L.; Gardner, G.C. 1957. Applications of germicidal ultraviolet in infectious disease laboratories: III. The use of ultraviolet barriers on animal cage racks. *Proc. Animal Care Panel* 7:235-244.

439

Rich, S.T.; Cohen, B.J. 1962. Restraint unit for large monkeys. *Proc. Animal Care Panel* 12:113-116.

440

Syverton, J.T.; Olitsky, P.K. 1934. Bacteriological studies on an epizootic of intestinal disease in suckling and newly weaned mice. *J. Exp. Med.* 60:385-394.

441

Trexler, P.C. 1961. The gnotobiot: Review and future. *Bio-Med. Purview* 1:47-58.

442

Trexler, P.C.; Reynolds, R.I. 1957. Flexible film apparatus for rearing and use of germ-free animals. *Appl. Microbiol.* 5:406-412.

443

Underdahl, N.R.; Young, G.A. 1957. An improved hood for swine hysterectomies. *J. Amer. Vet. Ass.* 131:222-224.

444

Valente, L.J.; Kulka, J.P. 1962. A handy cage for individual housing of mice. *Proc. Animal Care Panel* 12:19-20.

445

Van Bruggen, J.T. 1952. Cage assembly for small animals. *Nucleonics* 10:64-66.

446

Van den Ende, M.; Hubbard, A.J.H. 1943. Apparatus for the safe inoculation of animals with dangerous pathogens. *J. Hyg.* 43:189-194.

447

Vickers, J.H. 1962. Importing monkeys under isolated conditions. *Proc. Animal Care Panel* 12:107-112.

448

Wedum, A.G. 1964. Laboratory safety in research with infectious aerosols. Public Health Rep. 79:619-633.

449

Young, G.A.; Underdahl, N.R. 1953. Isolation units for growing pigs without colostrum. Amer. J. Vet. Res. 19: 571-574.

450

Young, G.A.; Underdahl, N.R.; Hinz, R.W. 1955. Procurement of baby pigs by hysterectomy. Amer. J. Vet. Res. 16: 123-131.

D. ANIMAL CROSS-INFECTION

451

Adams, W.R.; Kraft, L.M. 1963. Epizootic diarrhea of infant mice; identification of the etiologic agent. Science 141:359-360.

452

Alexander, T.J.L. 1962. Viral encephalomyelitis of swine in Ontario - experimental and natural transmission. Amer. J. Vet. Res. 23:756-762.

453

Bartell, J.; Spieler, F. 1905. Der gang der naturlichen tuberkuloseinfektion beim jungen merschweinchen. Wien. Klin. Wochensh. 18:218.

454

Beem, M.; Wright, F.H.; Hamre, D.; Egerer, R.; Oehme, M. 1960. Association of the chimpanzee coryza agent with acute respiratory disease in children. New Engl. J. Med. 263:523-530.

455

Bell, J.F.; Owen, C.R.; Jellison, W.L.; Moore, G.J.; Buker, E.O. 1962. Epizootic tularemia in pen-raised beavers and field trials of vaccines. Amer. J. Vet. Res. 23:884-888.

456

Bodian, D. 1948. Poliomyelitis in an inoculated rhesus monkey, and in orally inoculated monkeys receiving desoxy-pyridoxine. Amer. J. Hyg. 48:87-93.

457

Bohl, E.H.; Ferguson, L.C. 1952. Leptospirosis in domestic animals. J. Amer. Vet. Med. Ass. 121:421-428.

458

Brandly, C.A.; Hanson, R.P.; Chow, T.I. 1951. Vesicular stomatitis with particular reference to the 1949 Wisconsin epizootic, p. 61-69. Proc. Book, Amer. Vet. Med. Ass.

459

Bunnell, D.E.; Bay, W.W.; Hutchings, L.M. 1954. Studies on vaccination of swine against brucellosis. Amer. J. Vet. Res. 14:164-170.

460

Burmester, B.R. 1957. Recent studies on the natural transmission of visceral lymphomatosis. 94th Annu. Meeting Amer. Vet. Med. Ass., Cleveland, Ohio, August 19-22, 1957.

461

Casals, J.; Olitsky, P.K. 1945. Enduring immunity following vaccination of mice with formalin-inactivated virus of Russian spring-summer encephalitis. J. Exp. Med. 82:431-443.

462

Castleberry, M.W.; Converse, J.L.; Del Favero, J.E. 1963. Coccidioidomycosis transmission to infant monkey from its mother. Arch. Pathol. 75:459-461.

463

Chamberlain, R.W.; Kissling, R.E.; Stamm, D.D.; Nelson, D.E.; Sikes, R.K. 1956. Venezuelan equine encephalomyelitis in wild birds. Amer. J. Hyg. 63:261-273.

464

Combesco, D. 1960. Observations made in the course of a study concerning relapses and recidivations of experimental epidemic typhus in the guinea pig. Arch. Roumaines Patol. Exp. Microbiol. 19:181-188.

465

Constantine, D.G. 1962. Rabies transmission by nonbite route. Public Health Rep. 77:287-289.

466

Couland, E. 1922. Trois cas de tuberculose pulmonaire spontanée dans la progéniture d'un lapin granulique. *Rev. Tuberc.* 3:411.

467

Couland, E. 1924. La tuberculose par contamination naturelle chez le lapin. *Ann. Inst. Pasteur* 38:581.

468

Craig, D.E. 1957. Contact transmission of poliomyelitis among monkeys. *Bacteriol. Proc.* 64.

469

Cummings, D.E. 1932. Naturally acquired tuberculosis infection among Saranac laboratory guinea pigs. *Amer. Rev. Tuberc.* 26:388-407.

470

Druett, H.A.; Henderson, D.W.; Packman, L.; Peacock, S. 1953. Studies on respiratory infection: I. The influence of particle size on respiratory infection with anthrax spores. *J. Hyg.* 51:359-371.

471

Druett, H.A.; Henderson, D.W.; Peacock, S. 1956. Studies on respiratory infection: III. Experiments with Brucella suis. *J. Hyg.* 54:49-57.

472

Druett, H.A.; Robinson, J.M.; Henderson, D.W.; Packman, L.; Peacock, S. 1956. Studies on respiratory infection: II. Influence of aerosol particle size on infection of the guinea pig with Pasteurella pestis. *J. Hyg.* 54:37-48.

473

Elberg, S.S.; Henderson, D.W. 1948. Respiratory pathogenicity of brucella. *J. Infect. Dis.* 82:302-306.

474

Faber, H.K.; Silverberg, R.J.; Dong, L. 1943. Poliomyelitis in the cynomolgus monkey: I. Comparison of the upper portion of the alimentary tract with its lower gastrointestinal portion, as a portal of entry, with special reference to the peripheral ganglia. *J. Exp. Med.* 78:499-518.

475

Faber, H.K.; Silverberg, R.J.; Dong, L. 1944. Poliomyelitis in the cynomolgus monkey: III. Infection by innalation of droplet nuclei and the nasopharyngeal portal of entry, with a note on this mode of infection in rhesus. *J. Exp. Med.* 80:39-57.

476

Faber, H.K.; Silverberg, R.J.; Dong, L. 1950. Studies on the entry and egress of poliomyelitis infection: I. Neurotropic infection of the peripheral ganglia in apparently healthy monkeys following casual exposure. *J. Exp. Med.* 91:417-424.

477

Fellowes, O.N.; Dimopoulos, G.T. 1957. Isolation of vesicular stomatitis virus from mouse mothers after inoculation of suckling mouse litters. *J. Bacteriol.* 73:444-445.

478

Fromm, G. 1953. A man suffering from open tuberculosis as a source of infection for cattle and goats. *Tierhalt.* 95:69-96, 155-171.

479

Goettler, V. 1956. Tuberculosis in cattle from man. *Berl. Munch. Tierarztl. Wochenschr.* 69:185-187. Also English Summary, *Vet. Bull.* 3353.

480

Goodpasture, E.W. 1924. Spontaneous encephalitis in rabbits. *J. Infect. Dis.* 34:428-432.

481

Gordon, J.E.; Ingalls, T.H. 1957. Contact and air-borne transmission of infectious agents. *Amer. J. Med. Sci.* 233:334-357.

482

Gowen, J.W. 1948. Inheritance of immunity in animals, p. 215-254. In Charles E. Clifton, Sydney Russell, and H. Albert Barker (ed.), *Annual review of microbiology*, Annual Reviews, Inc., Stanford, Calif.

- 33
riffin, C.A.; Thompson, W.R. 1956. Studies of prepared feed in relation to salmonella infection in laboratory animals: II. Reproduction and growth of ice on heated and unheated commercially prepared feeds. *Amer. J. Vet. Res.* 17: 11-317.
- 34
uerin, C. 1908. Cas de tuberculose spontanee du lapin. *Hyg. Viande Lait.* :7.
- 85
ustafson, D.P.; Moses, H.E. 1953-1954. The English sparrow as a natural carrier of Newcastle disease virus. *Amer. J. Vet. Res.* 14:581-585.
- 86
watkin, R. 1949. Studies in pullorum diseases: XXIII. Infection of adult turkeys by mouth and by contact with infected hens. *Can. J. Comp. Med. Vet. Sci.* 13.
- 87
abel, K. 1947. Tuberculosis in a laboratory monkey colony. *Amer. Rev. Tuberc.* 55:77-92.
- 88
Landy, A.H.; Trapp, A.L.; Gale, C.; Ling, N.B. 1963. Experimental transmission of shipping fever in calves. *Amer. J. Vet. Res.* 24:287.
- 89
Ganson, R.P. 1952. The natural history of vesicular stomatitis. *Bacteriol. Rev.* 16:179-204.
- 90
Larding, H.B.; Cohen, B.J. 1951. An isolation program for monkeys: epidemiology and physical aspects. *Proc. Animal Care Panel 2nd Annu. Meeting:* 36-35.
- 91
Harper, G.J.; Morton, J.D. 1953. The respiratory retention of bacterial aerosol: experiments with radioactive spores. *J. Hyg.* 51:372-385.
- 492
Hawthorne, V.M.; Jarrett, W.F.H.; Lauder, I.; Martin, W.B.; Roberts, G.B.S. 1957. Tuberculosis in man, dog, and cat. *Brit. Med. J.* 2:675-678.
- 493
Hawthorne, V.M.; Lauder, I.; Jarrett, W.F.H.; Lawson, D.D.; Martin, W.B.; McNaught, W.; Roberts, G.B.S. 1952. Tuberculosis in man, dog, and cat. *Amer. Rev. Respirat. Dis.* 85:858-869.
- 494
Holden, P. 1955. Transmission of Eastern equine encephalomyelitis among ring-necked pheasants. *Proc. Soc. Exp. Biol. Med.* 88:607-610.
- 495
Howe, H.A.; Bodian, D. 1944. Poliomyelitis by accidental contagion in the chimpanzee. *J. Exp. Med.* 80:383-390.
- 496
Howe, H.A.; Bodian, D. 1945. Question of transmission of poliomyelitis to rhesus monkeys by accidental laboratory infection. *Amer. J. Hyg.* 42:266-273.
- 497
Hughes, R.W.; Gustafson, D.P. 1960. Some factors which may influence the transmission of porcine cholera. *Clin. Vet.* 5:220-234.
- 498
Iiani, J.A.; Seetharaman, C. 1947. Transmission of Ranikhet disease of fowls. *Indian J. Vet. Sci.* 17:167-168.
- 499
Jawetz, E.; Baker, W.H. 1950. A pneumotropic pasteurilla of laboratory animals: II. Pathological and immunological studies with the organism. *J. Infect. Dis.* 86:184-196.
- 500
Jemski, J.V.; Kirchheimer, W.F.; Phillips, G.B.; Maire, L.F. 1958. Tuberculin testing of monkeys experimentally infected with aerosols of tubercle bacilli. *Bacteriol. Proc.*, p. 79.

- 501
King, W.W. 1906. Experimental transmission of Rocky Mountain spotted fever by means of the tick. Preliminary note. Public Health Rep. 21:863-864.
- 502
Kirchheimer, W.F.; Jemski, J.V.; Phillips, G.B. 1961. Cross infections among animals of diseases transmissible to man. Proc. Animal Care Panel 11: 83-92.
- 503
Kissling, R.E.; Chamberlain, R.W.; Nelson, D.B.; Stamm, D.D. 1956. Venezuelan equine encephalomyelitis in horses. Amer. J. Hyg. 63:274-287.
- 504
Lee, K.M.; Moro, M.; Baker, J.A. 1954. Transmissible gastroenteritis in pigs. Amer. J. Vet. Res. 15:364-372.
- 505
Live, I.; Nichols, A.C. 1961. The animal hospital as a source of antibiotic-resistant staphylococci. J. Infect. Dis. 108:195-204.
- 506
Luginbuhl, R.E.; Jungherr, E.L.; Satraine, S.F.; Wallis, R.C.; Lamson, A.L. 1955. Experimental pen transmission of Eastern equine encephalomyelitis virus in pheasants. Bacteriol. Proc. 68.
- 507
Lurie, M.B. 1930. Experimental epidemiology of tuberculosis: Air-borne contagion of tuberculosis in an animal room. J. Exp. Med. 51:743-751.
- 508
Lurie, M.B. 1944. The prevention of natural air-borne contagion of tuberculosis in rabbits by ultraviolet irradiation. J. Exp. Med. 79:559-572.
- 509
Mannini, A.; Medearis, D.M. 1961. Mouse salivary gland virus infections. Amer. J. Hyg. 73:329-343.
- 510
Manthei, C.A.; Mingle, C.K.; Carter, R.W. 1952. Brucella suis infection in suckling and weanling pigs. J. Amer. Vet. Med. Ass. 121:373-382.
- 511
McCoy, G.W.; Chapin, C.W. 1911-1912. Tuberculosis among ground squirrels (Citellus beecheyi, Richardson). J. Med. Res. 25:189.
- 512
McDaniel, L.S.; McDaniel, I.N.; Chute, H.L. 1962. Laboratory transmission of Rou. sarcoma virus by Aedes aegypti. Avian Diseases 6:127-132.
- 513
Menges, R.W.; Furcolow, M.L.; Hinton, A. 1954. The role of animals in the epidemiology of histoplasmosis. Amer. J. Hyg. 59:113-118.
- 514
Meyer, K.F.; Eddie, B. 1951. Human carrier of the psittacosis virus. J. Infect. Dis. 88:109-125.
- 515
Moeller, R.W.; Smith, I.M.; Shoenicke, A.C.; Tjalma, R.A. 1962. Transfer of hospital staphylococci from man to farm animals. J. Amer. Vet. Med. Ass. 142: 613-617.
- 516
Moteiunas, L.I. 1959. An outbreak of vaccinia among animals and human beings. Zh. Mikrobiol. Epidemiol. Immunobiol. 30:155-156.
- 517
Nelson, E.C. 1935. Cultivation and cross infection experiments with balantidia from the pig, chimpanzee, guinea pig, and Macacus rhesus. Amer. J. Hyg. 22:26-43.
- 518
Nelson, J.B. 1940. Infectious catarrh of the albino rat: I. Experimental transmission in relation to the role of Actinobacillus muris. J. Exp. Med. 72:645-654.

519

Nelson, J.B. 1950. Association of a special strain of pleuropneumonia-like organisms with conjunctivitis in a mouse colony. *J. Exp. Med.* 91:309-320.

520

Nye, E.R. 1960. Mouse infection with Semliki Forest virus following the biting of infected *Aedes aegypti*. *Trans. Roy. Soc. Trop. Med. Hyg.* 54:286.

521

Perla, D. 1927. Experimental epidemiology of tuberculosis. *J. Exp. Med.* 45: 209-226.

522

Phillips, G.B.; Broadwater, G.C.; Reitman, M.; Alg, R.L. 1956. Cross-infections among brucella-infected guinea pigs. *J. Infect. Dis.* 99:56-59.

523

Phillips, G.B.; Jemski, J.V.; Brant, H.G. 1956. Cross-infection among animals challenged with *Bacillus anthracis*. *J. Infect. Dis.* 99:222-226.

524

Phillips, G.B.; Jemski, J.V.; Brant, H.G.; Novak, F.E. 1956. Cross-infection among animals challenged with *Bacillus anthracis*. *Bacteriol. Proc.*, p. 91.

525

Phillips, G.B.; Jemski, J.V.; Reitman, M.; Alg, R.L. 1955. Cross-infection among experimentally infected small animals. *Bacteriol. Proc.*, p. 45.

526

Pille, F.R.; Nadaichik, L.V.; Varonina, F.W. 1963. ECHO virus studies in monkey experiments. *Vopr. Virusol.* 8: 204-210. (English summary)

527

Rappensiek, G.C. 1944. Listerellosis—case report. *J. Amer. Vet. Med. Ass.* 105:147-148.

528

Rest, R.; Van Ulsen, E.W. 1954. Two cases of open pulmonary tuberculosis in cattle caused by avian tubercle bacilli. *Tijdschr. Diergeneesk.* 79:579-586.

529

Reber, E.F. 1956. Air-borne transmissible gastroenteritis. *Amer. J. Vet. Res.* 63:194-195.

530

Remlinger, M.F. 1923. Un parasite bacteriologique. La grande receptivite du cobaye a la tuberculose experimentale et la rarete de sa contamination dans les laboratoires. *Bull. Ann. Hyg.* 89:456.

531

Renoux, G.; Sacquet, E. 1957. Brucellose spontanee du lapin domestique. *Arch. Inst. Pasteur Tunis* 34:231-232.

532

Rifaat, M.A.; Moray, T.A. 1962. Experimental transmission of toxoplasmosis in laboratory animals and birds. *J. Trop. Med. Hyg.* 65:314-317.

533

Romer, P.H. 1912. Ueber immunität gegen natürliche infektion u.s.w. mit tuberkelbazillen. *Beitr. Klin. Tuberk.* 22:265.

534

Rosenthal, S.R.; Elmore, F.H. 1961. Studies on the contagiousness of coccidioidomycosis: III. Infection in pigs by contact with diseased animals. *Amer. Rev. Tuberc.* 61:106-115.

535

Rothe, E. 1913. Studien ueber spontane kaninchentuberkulose. *Veroeffentl. d. Koch, Stift. Bekaeupf. Tuberk.* 1:1.

536

Schmidt, L.H. August 1956. Observations on the unity of simian pulmonary tuberculosis in defining the therapeutic potentialities of isoniazid. *Amer. Rev. Tuberc. Pulmonary Disease Suppl.*, p. 138-153.

537

Schwarte, L.H.; Mathews, J. 1961. Transmission of hog cholera via the respiratory tract. *N. Amer. Vet.* 671-672.

538

Sevian, M.; Chamberlain, D.M.; Larose, R.N. 1963. Avian lymphomatosis: V. Airborne transmission. *Avian Diseases* 7:102-105.

539

Sinha, S.K.; Hanson, R.P.; Brandly, C.A. 1954. Aerosol transmission of Newcastle disease in chickens. *Amer. J. Vet. Res.* 55:287-292.

540

Smith, C.E.; Pappagianis, D.; Saito, M.T. 1957. The public health significance of coccidioidomycosis, p. 3-9. Publication 575. Public Health Serv.

541

Smith, D.T. 1927. Epidemiology studies on the respiratory infection of the rabbit. *J. Exp. Med.* 45:553-559.

542

Stanley, G.A. 1926. Tuberculosis of the cat. *J. Comp. Pathol. Therapy* 39: 71-79. *Biol. Abst.* 2, No. 2090, 1928.

543

Stulberg, C.S.; Slater, E.A.; Brumfield, H.P.; Halvorson, H.O. 1948. Purified human poliomyelitis virus. Infectivity for cynomolgus monkeys. *Proc. Soc. Exp. Biol. Med.* 68:282-284.

544

Vardaman, T.H.; Heddleston, K.L.; Watko, L.P. 1962. Response of calves to components of a shipping fever complex and to contact with naturally infected calves. *Amer. J. Vet. Res.* 23:827-831.

545

Vrolijk, H.; Verlinde, J.D.; Braams, W.G. 1957. Virus pneumonia (snuffling disease) in laboratory rats and wild rats due to an agent probably related to grey lung virus of mice. *Antonie van Leeuwenhoek J. Microbiol. Serol.* 23:173-183.

546

Wedum, A.G. 1964. Laboratory safety in research with infectious aerosols. *Public Health Rep.* 79:619-633.

547

Wells, W.F.; Lurie, M.B. 1941. Experimental air-borne disease: Quantitative natural respiratory contagion of tuberculosis. *Amer. J. Hyg.* 34:21-40.

548

Wright, J.H.; Craighead, E. 1922. Infectious motor paralysis in young rabbits. *J. Exp. Med.* 36:134-140.

549

Zarafonitis, C.; Sulin, S.E.; Terry, C.H. 1947. Poliomyelitis (Lansing) contact infection in mice. *J. Bacteriol.* 53:367.

V. DESIGN OF FACILITIES

A. POLICIES AND GENERAL REQUIREMENTS

550

Abplanalp, G.H.; Stephenson, J.W. 1960. Regulation of refuse incinerator design by public agencies. Amer. J. Public Health 50:1155-1162.

551

Animal Care Panel, Animal Facilities Standards Committee. 1963. Guide for laboratory animal facilities and care. Public Health Service Publication 1024, U.S. Government Printing Office, Washington, D.C. 33 p.

552

Annotation. 1947. A laboratory building for study of highly infectious diseases. Engl. News Record 139:460-463.

553

Anthony, A. 1963. Criteria for acoustics in animal housing. Lab. Animal Care 13:340-347.

554

Barker, E.V. 1963. Construction materials. Lab. Animal Care 13:265-270.

555

Blenderman, L. 1956. Water service for research laboratories. Air Conditioning, Heating Ventilation 53:115-117.

556

Brewer, N.R.; Penfold, T.W. 1961. Thoughts concerning the design of animal quarters. Proc. Animal Care Panel 11: 281-290.

557

Chatigny, M.A. 1961. Protection against infection in the microbiology laboratory, devices and procedures, p. 131-192. In Wayne W. Umbreit (ed.) Advances in applied microbiology, Vol. 3. Academic Press, New York.

558

Cobb, K.W. 1963. Lighting criteria for animal housing. Lab. Animal Care 13: 332-336.

559

Cofrancesco, J.A.; McMaster, W.W. 1962. Planning the health research facility. Res. Facilities Planning Branch, U.S. National Institutes of Health, Bethesda, Md. 46 p. (Selected Refs., p. 47-50)

560

Coleman, H.S. (ed.) 1961. Laboratory design. Reinhold Publishing Corporation, New York. 393 p.

561

Committee on Hospital Facilities, Engineering and Sanitation Section. 1956. Hospital solid wastes and their handling. Amer. J. Public Health 46: 357-367.

562

Cumming, C.N.W. 1954. Animal house design in the United States of America, p. 41-52. In Collected Papers, Vol. 2, The design of animal houses, Laboratory Animals Bureau, M.R.C. Lab., London.

563

Dalldorf, G. 1955. The virus laboratory: suggestions regarding facilities, equipment and methods, p. 72-81. In G. Dalldorf (ed.) Introduction to virology. Charles C. Thomas, Springfield, Ill.

564

Davies, R.L. 1957. Design of research laboratories. Roy. Inst. Chem. J. 81: 5-15.

565

Day, H.S. 1963. Planning and equipping a disease diagnostic control laboratory. Lab. Animal Care 13:431-437.

566

Deeble, P.W. 1963. Programming for isolation, quarantine, and infectious disease facilities. Lab. Animal Care 13:277-290.

567

Devereux, R.C. deB.; Charlton, R. 1960. Design of a pharmaceutical laboratory. Inst. Heating Ventilation Eng. J. 30: 45-49.

568

Dolowy, W.C. 1961. Medical research laboratory of the University of Illinois. Proc. Animal Care Panel 11:267-280.

569

Flynn, R.J. 1958. Argonne National Laboratory animal facilities, p. 57-62. In Collected Papers, Vol. 7, The organization and administration of an animal division, Laboratory Animals Bureau, M.R.C. Lab., London.

570

Gardner, J.A., Jr. 1963. Considerations in waste disposal. Lab. Animal Care 13:357-365.

571

Grist, N.R. 1954. A small animal house, p. 29-33. In Collected Papers, Vol. 2, The design of animal houses, Laboratory Animals Bureau, M.R.C. Lab., London.

572

Guss, L. 1961. Plumbing design for an aerospace medical research center. Air Conditioning, Heating Ventilation 58: 105-110.

573

Harrell, G.T. 1962. Planning and construction of a new medical school. J. Med. Educ. 37:1-9.

574

Hemmings, W.A. 1954. Some factors in planning a small animal house, p. 21-27. In Collected Papers, Vol. 2, The design of animal houses, Laboratory Animals Bureau, M.R.C. Lab., London.

575

Hickey, J.L. 1962. Germfree sanitary engineering. Amer. J. Public Health 52:192-199.

576

Holbrook, J.A.; Brewer, N.R. 1963. Planning and equipping animal operating facilities. Lab. Animal Care 13:424-430.

577

How to plan the laboratory for the general hospital. Mod. Hosp. 96:83-98, 1961.

578

Institute of Laboratory Animal Resources, Committee on the Animal Facilities Survey. 1962. Animal facilities in medical research; a preliminary study. National Academy of Sciences-National Research Council, Washington, D.C. 53 p.

579

Larkin, M.C. 1963. Criteria for incinerating systems. Lab. Animal Care 13:382-387.

580

Lewis, H.F. (ed.). 1962. Laboratory planning for chemistry and chemical engineering. Reinhold Publishing Corporation, New York. 522 p.

581

Livingston, J.R. 1963. Programming distribution systems. Lab. Animal Care 13:369-379.

582

Munkelt, F.H. 1948. Air purification and deodorization by use of activated carbon. Refrig. Eng. 56:222. (Appl. Data 42:1-8, Sept.)

583

National Institutes of Health, Division of Research Services. 1962. Planning and design of medical research facilities. U.S. Department Health, Education Welfare, Bethesda, Md. 29 p.

584

Perkowski, J. 1959. The research laboratory. J. Ind. Eng. 10:255-260.

585

Pipher, W.V. 1963. Criteria for animal room design. Lab. Animal Care 13: 251-257.

586

Pittaway, E.M. 1963. Soundproofing animal rooms. Vet. Record 75:741.

587
questionnaire reveals animal room conditions. Heating, Piping Air Conditioning, October:98-104, 1963.

588
Assweiler, C.F. 1961. Physical facilities for research. Chem. Eng. News 32: 4930-4934.

589
Leyniers, J.A. 1942. Housing laboratory animals. Mod. Hosp. 58:64-67.

590
Leyniers, J.A. 1964. Controlled environmental facility for maintaining closed animal quarters. Lab. Animal Care 14:134-154.

591
Hunkle, R.S. 1964. Laboratory animal housing, Parts I and II. AIA J., March and April, p. 77-80.

592
Hunkle, R.S.; McMaster, W.W. 1962. Laboratory animal housing. U.S. National Institutes Health, Res. Facilities Planning Branch, Bethesda, Md. 42 p. (Selected Ref., p. 39-42)

593
Schaefer, J.P. 1963. The adequacy of electric power. Lab. Animal Care 13: 351-356.

594
Scott, R.; Bennet-Clark, H.C. 1963. Fluorescent lighting in biological research. Nature 197:1321-1322.

595
Sheinberg, H.; Thomas, R.F. 1948. Installation of a chemical research laboratory. U.S. Atomic Energy Comm. Doc. AECD-1866, U.S. Atomic Energy Comm., Oak Ridge, Tenn.

596
Smith L. 1961. Mechanical designs aid research for better drugs. Heating, Piping Air Conditioning 33:120-122.

597
Snow, D.L. 1962. Principles of space planning for biomedical research laboratories. U.S. National Institutes Health, Div. Res. Services, Bethesda, Md., 97 p.

598
Snow, D.L. 1963. Space planning principles for biomedical research laboratories. Public Health Monographs 71: 1-52.

599
Solotorvsky, M.; Robinson, H.J.; Knicker, M. 1953. Design and operation of a laboratory for experimental diagnosis. Amer. Rev. Tuberc. 68:212-219.

600
Staff of the West Foundation. Housing for experimental animals. Inst. of Lab. Animal Resources, Nat. Acad. Sci., Washington, D.C. 21 p.

601
Strange, N. 1954. Animal houses: Some aspects of the design, construction and layout, p. 53-68. In Collected Papers, Vol. 2, The design of animal houses, Laboratory Animals Bureau, M.R.C. Lab. London.

602
Thorp, W.T.S. 1960. The design of animal quarters. J. Med. Educ. 35:4-11.

603
Thorp, W.T.S. 1961. Facilities for medical research with animals. Proc. Animal Care Panel 11:167-168.

604
Thorp, W.T.S. 1961. Space requirements in the design of facilities for small animal spaces. Care Use Lab. Animals Federation Proc. 20:919-920.

605
U.S. Atomic Energy Commission. 1948. Qualitative specifications for animal laboratories for experimental work with radioactive materials at Brookhaven National Laboratory. U.S. Atomic Energy Comm. AECU-298. Arthur D. Little, Inc., Cambridge, Mass. 94 p.

606

U.S. Navy Bureau of Yards and Docks. 1961. Design Manual: Research development and test facilities, (Nav. Docks DM-31). U.S. Government Printing Office, Washington, D.C.

607

U.S. Public Health Service. 1961. Medical school facilities planning considerations and architecture guide. Public Health Serv. Publ. 875, U.S. Government Printing Office, Washington, D.C. (\$1.00).

608

U.S. Public Health Service. 1961. Planning considerations. Public Health Serv. Publ. 874, U.S. Government Printing Office, Washington, D.C. (\$1.00).

609

U.S. Public Health Serv. in Collaboration with Coll. Am. Pathol. 1961. Planning the laboratory for the general hospital. Arch. Rec. 129:160-188.

610

U.S. Public Health Service, Division of Hospital and Medical Facilities. 1962. Design features affecting asepsis in the hospital. Public Health Serv. Publ. 930-D-9, U.S. Government Printing Office, Washington, D.C. 20 p. (25 cents).

611

Wedum, A.G.; Hanel, E., Jr.; Phillips, G.B.; Miller, O.T. 1956. Laboratory design for study of infectious diseases. Amer. J. Public Health 46:1102-1113.

612

Wedum, A.G.; Phillips, G.B. 1964. Criteria for design of a microbiological research laboratory. J. Amer. Soc. Heating, Refrig. Air Conditioning 6: 46-52.

613

Weitz, B. 1954. A new small animal unit, p. 11-19. In Collected Papers, Vol. 2, The design of animal houses. Laboratory Animals Bureau, M.R.C. Lab., London.

614

White, P.A.F. 1963. Planning a new laboratory. Nature 198:1238.

615

Woodson, W.E. 1954. Human engineering guide for equipment designs. Univ. of Calif. Press, Berkeley, Calif. 246 p.

616

Worden, A.N.; Lane-Petter, William (ed.). 1957. The UFAW handbook of the care and management of laboratory animals. The Williams and Wilkins Co., Baltimore. 951 p.

B. VENTILATED CABINETS

617

Blickman, B.I.; Lanahan, T.B. 1960. Ventilated work cabinets reduce lab risks. Safety Maintenance 120:34-36, 44-45.

618

Bond, H.K. 1961. Engineers guide to dust hoods and dry boxes. Electronic Design, March 1, 1961.

619

Brown, A.E. 1961. A portable protective cabinet for handling infective material. J. Med. Lab. Technol. 18: 272-275.

620

Chatigny, M.A. 1961. Protection against infection in the microbiological laboratory, devices and procedures, p. 131-192. In Wayne W. Umbreit (ed.) Advances in applied microbiology, Vol. 3. Academic Press, New York.

621

Couling, C.W.; Rees, R.J.W. 1959. A protective cabinet for the postmortem examination of infected animals. J. Hyg. 57:407-409.

622

Decker, H.M.; Geile, F.A.; Harstad, J.B.; Gross, N.H. 1952. Spun glass air filters for bacteriological cabinets, animal cages and shaking machine containers. J. Bacteriol. 63: 377-383.

623

Dolowy, W.C. 1961. Medical research laboratory of the University of Illinois. Proc. Animal Care Panel 11:267-280.

624

Drybox Safety, Safety News Letter, Nat. Safety Council, Chicago. August:1-2, 1956.

625

Editorial: New ways to guard your workers' health. Occupational Hazards: September:40-42, 1963.

626

Fitzpatrick, J.P.; Bohlen, N.G.; Gold, S.S. 1949. Low activity hoods. Doc. ANL-433b. Argonne National Laboratory, Chicago.

627

Gibb, T.R.P., Jr. 1957. Inert-atmosphere dry box. Anal. Chem. 29:584-587.

628

Gibson, J. 1955. Safety in a tuberculosis laboratory. Med. Technician's Bull. Suppl. U.S. Armed Forces Med. J. 6:181.

629

Giles, F.J., Jr. 1960. Laboratory hoods - their design and application, p. 125-130. In Safety Monographs for Colleges and Universities No. 6. Third national conference on campus safety. National Safety Council, Chicago.

630

Gremillion, G.G. 1959. The use of bacteria-tight cabinets in the infectious disease laboratory, p. 171-182. In Proceedings of the 2nd Symposium on Gnotobiotic Technology, Univ. Notre Dame Press, Notre Dame, Ind.

631

Hambleton, A.; Merger, C.E. The Carlton safety cabinet. S.H. Newman Co., Ltd., Toronto, Ontario. Pamphlet.

632

Harris-Smith, R.; Pirt, S.J.; Finman, J.E. 1963. A ventilated germ-free cabinet for the microbiological laboratory. Biotechnol. Bioeng. 5:53-58.

633

Jemski, J.V.; Phillips, G.B. 1963. Microbiological safety equipment. Lab. Animal Care 13:2-12.

634

Jemski, J.V.; Phillips, G.B. 1964. Aerosol challenge of animals, p. 277-341. In W.I. Gay (ed.) Methods in animal experimentation. Academic Press, Inc., New York.

635

Jensen, K.A. 1954. Towards a standardization of laboratory methods. Bull. Intern. Union. Against Tuberc. 24:1.

636

Keeney, E.L. 1946. A protective cabinet for investigators studying Coccidioides immitis and other infectious fungi. Bull. Johns Hopkins Hosp. 78: 113-118.

637

Laboratory hood ventilation design. Mich. Occupational Health 4:1-8, 1959.

638

Lind, A. 1957. Ventilated cabinets in a tuberculosis laboratory. Bull. World Health Organ. 16:448-453.

639

Lind, A. 1958. Danger of T.B. infection to personnel in pathological laboratories. Trans. NAPT Commonwealth Chest Conf. Nat. Ass. Prevent. Tuberc. Tavistock House North, Tavistock Square, London, W.C.1., England.

640

Phillips, G.B.; Jemski, J.V. 1963. Biological safety in the animal laboratory. Lab. Animal Care 13:13-20.

641

Phillips, G.B.; Novak, F.E.; Alg, R.I. 1955. Portable inexpensive plastic safety hood for bacteriologists. Appl. Microbiol. 3:216-217.

642

Reitman, M.; Wedum, A.G. 1956. Microbiological safety. Public Health Rep. 71:659-665.

643

Shepard, C.C.; May, C.W.; Topping, H.B. 1945. A protective cabinet for infectious disease laboratories. J. Lab. Clin. Med. 30:712-716.

644

Sherfey, J.M. 1954. Concerning the types of dry boxes commercially available. *Ind. Eng. Chem.* 46:435.

645

Trexler, P.C. 1959. The use of plastics in the design of isolater systems. *Ann. N.Y. Acad. Sci.* 78:29-35.

646

Underdahl, N.R.; Young, G.A. 1957. An improved hood for swine hysterectomies. *J. Amer. Vet. Ass.* 131:222-224.

647

Van den Ende, M. 1943. Apparatus for the safe inoculation of animals with dangerous pathogens. *J. Hyg.* 43:189-194.

648

Walls, E.L.; Metzner, W.P. 1962. Fume hoods, safety vs. costs. *Ind. Eng. Chem.* 54:42-45.

649

Weed, L.A.; Mellin, M. 1963. Mobile safety hood for collection of sputum induced by aerosol inhalation. *Proc. Mayo Clin.* 38:52-59.

650

Wedum, A.G. 1953. Bacteriological safety. *Amer. J. Public Health* 43:1428-1437.

651

Wedum, A.G. May 1957. Development of specialized safety equipment in conjunction with B-W R&D program. 12th Annu. Meeting Armed Forces Chem. Ass., Washington, D.C.

652

Wedum, A.G. 1961. Control of laboratory airborne infection. *Bacteriol. Rev.* 25:217-216.

653

Wedum, A.G. 1964. Laboratory safety in research with infectious aerosols. *Public Health Rep.* 79:619-633.

654

Wedum, A.G.; Hanel, E., Jr.; Phillips, G.B.; Miller, O.T. 1956. Laboratory design for study of infectious diseases. *Amer. J. Public Health* 46:1102-1113.

655

Wedum, A.G.; Phillips, G.B. 1964. Criteria for design of a microbiological research laboratory. *J. Amer. Soc. Heating Refrig. Air Conditioning* 6:46-52.

656

Williams, R.E.O.; Lidwell, O.M. 1957. A protective cabinet for handling infective material in the laboratory. *J. Clin. Pathol.* 10:400-402.

C. AIR HANDLING, VENTILATION, AND FILTRATION

657

Alschuler, J.H. 1963. Air treatment for research animal housing. *Lab. Animal Care* 13:321-326.

658

Anonymous. 1952. Industrial air conditioning. *Heating, Ventilating Air Conditioning Guide* 30:933-954.

659

Barrett, J.C. 1962. Design techniques for ventilating research labs. *Air Eng.* 4:31-36.

660

Blowers, R.; Bound, W.H. 1960. Air hygiene and vacuum cleaners. *Monthly Bull. Med. Res. Council (Great Britain)* 19:207-211.

661

Blowers, R.; Crew, B. 1960. Ventilation of operating theatres. *J. Hyg.* 58:427-448.

662

Bourdillon, R.B., et al. 1948. V. Air disinfection by recirculation through filters, p. 208-223. In R.B. Bourdillon, et al. (ed.) *Studies in air hygiene*. Medical Research Council Report Series No. 262, His Majesty's Stationery Office, London.

663

Bourdillon, R.B., et al. 1948. VII. Airborne bacteria observed in field trials, p. 233-263. In R.B. Bourdillon, et al. (ed.) Studies in air hygiene. Medical Research Council Report Series No. 262, His Majesty's Stationery Office, London.

664

Brewer, J.H. 1948. Aseptic operation and control of ampule filling rooms. J. Amer. Pharm. Ass., Sci. Ed. 37:415-420.

665

Crossman, R.F.; Elsea, R. 1961. Air conditioning laboratory animal quarters. Air Conditioning, Heating Ventilation 58:71-76.

666

Darlow, H.M. 1961. The provision of clean air, p. 65-69. In Collected Papers, Vol. 10. Hazards in the animal house. Laboratory Animals Bureau, M.R.C. Laboratories, London.

667

Decker, H.M.; Buchanan, L.M.; Hall, L.B.; Goddard, K.R. 1962. Air filtration of microbial particles. Public Health Service Publication 953, U.S. Government Printing Office, Washington, D.C. 43 p.

668

Decker, H.M.; Buchanan, L.M.; Hall, L.B.; Goddard, K.R. 1963. Air filtration of microbial particles. Amer. J. Public Health 53:1982-1988.

669

Decker, H.M.; Citek, F.J.; Harstad, J.B.; Piper, F.J. 1963. Time temperature studies of spore penetration through an electric air sterilizer. Bacteriol. Proc., p. 28.

670

Decker, H.M.; Citek, F.J.; Harstad, J.B.; Gross, N.H.; Piper, F.J. 1954. Time temperature studies of spore penetration through an electric air sterilizer. Appl. Microbiol. 2:33-36.

671

Decker, H.M.; Geile, F.A.; Glick, C.A.; Scharnhorst, G.R. 1951. Spun glass air filters for bacteriological cabinets and other laboratory devices. Bacteriol. Proc., p. 46.

672

Decker, H.M.; Geile, F.A.; Harstad, J.B.; Gross, N.H. 1952. Spun glass air filters for bacteriological cabinets, animal cages, and shaking machine containers. J. Bacteriol. 63:377-383.

673

Decker, H.M.; Geile, F.A.; Moorman, H.E.; Glick, C.A. 1951. Removal of bacteria and bacteriophage from the air by electrostatic precipitators and spun glass filter pads. Heating, Piping Air Conditioning 23:125-128.

674

Decker, H.M.; Harstad, J.B.; Lense, F.T. 1957. Removal of bacteria from air streams by glass fiber filters. J. Air Pollution Control Ass. 7:15-16.

675

Decker, H.M.; Harstad, J.B.; Piper, F.J.; Wilson, M.E. 1954. Filtration of microorganisms from air by glass fiber media. Trans. Amer. Soc. Heating Ventilating Eng. 60:445-454.

676

Decker, H.M.; Harstad, J.B.; Piper, F.J.; Wilson, M.E. 1954. Filtration of microorganisms from air by glass fiber media. Heating, Piping Air Conditioning 26:155-158.

677

Decker, H.M.; Hoffman, R.K.; Wedum, A. 1959. To the Editor. Air sampling and other control techniques in study of hospital staphylococcal infection. Amer. J. Public Health 49:947-948.

678

Elsworth, R.; Morris, E.J.; East, P. 1961. The heat sterilization of spore-infected air. Chem. Eng. 157:A17-A18.

- 679
Fredette, V. 1959. The bacteriological efficiency of air conditioning systems in operating rooms. *Can. J. Surg.* 1: 226-229.
- 680
Gaulin, R.P. 1957. Air conditioning the hospital. *Air Conditioning, Heating Ventilating* 54:74-86.
- 681
Gaulin, R.P. 1963. How to keep infection out of the air. *Mod. Hosp.* 100: 93-98.
- 682
Gilbert, H.; Palmer, J.H. 1961. High efficiency particulate air filter units. U.S. Atomic Energy Commission. Office Tech. Serv., Department of Commerce, Washington 25, D.C.
- 683
Goddard, K.R. 1962. One hundred per cent outside air less costly than circulated air. *Air Eng.* 4:22-27.
- 684
Goddard, K.R. 1963. A procedure for microbiological testing of air filters. *Amer. Soc. Heating, Refrig. Air Conditioning Eng. J.* 5:75-82.
- 685
Gossett, J.; Dyle, J.J. 1960. Incinerator bars airborne spread of disease from lab. *Chem. Process.* Sept. 1960. 2 p.
- 686
Gremillion, G.G.; Miller, L.F.; Bodmer, G.A. 1958. An electric incinerator for sterilization of small volumes of air. *Appl. Microbiol.* 6:274-276.
- 687
Harris, G.J.; Gremillion, G.G.; Towson, P.H. 1964. Test new electric incinerator design for sterilizing laboratory air. *Heating, Piping Air Conditioning* 36:94-95.
- 688
Hemeon, W.C.L. 1951. Laboratory ventilation, p. 51-68. In H.S. Coleman (ed.) *Laboratory design.* Reinhold Publishing Corporation, New York.
- 689
HPAC Engineering Data File. 1964. Guidelines for designing research animal room air conditioning systems. *Heating, Piping Air Conditioning* 36: 172-186.
- 690
Humphrey, A.E.; Deindoerfer, F.H. 1961. Optimal design of fibrous filters for air sterilization. *Folia Microbiol.* 6:1-9.
- 691
Kranz, P. 1958. Jet stream ventilation for extreme air cleanliness. *Amer. Soc. Heating Refrig. Air Conditioning Eng. J.* 4:37-39.
- 692
Lapple, C.E.; McLeod, J.A.; Robinson, E. 1958. Airborne dye traces air pollutants. *Res. Ind. Stanford Res. Inst.* 10:14-15.
- 693
Marsh, R.C. 1963. The adaptability of laminar air flow for contamination control. *J. Amer. Ass. Contamination Control* 2:7-11.
- 694
Maxon, W.D.; Gaden, E.L., Jr. 1956. Fibrous filters for air sterilization. *Ind. Eng. Chem.* 48:2177-2179.
- 695
Michaelsen, G.S. 1961. Design and maintenance of operating room air conditioning and ventilating systems as reported by hospital maintenance engineers. *Amer. J. Public Health* 51: 1896-1901.
- 696
Munkelt, F.H. 1948. Air purification and deodorization by use of activated carbon. *Refrig. Eng.* 56:222. (*Appl. Data* 42:1-8)
- 697
Kenzetti, N. 1963. Maintenance of clean room areas. *Mod. Sanit. Bldg. Maintenance* 15:19-22, 52-53.

698

Ruddy, J.M. 1952. Air conditioning rodent quarters. Heating Ventilating March:4-5.

699

Sharpe, B.M. 1954. Sterilizing germ-contaminated air by direct heating. Ind. Heating 21:745.

700

Snow, D.L.; Barrett, J.C.; Bond, R.G.; Gaulin, R.P.; Hall, L.B.; Lenert, L.G.; Michaelsen, G.S.; Cviatt, V.R.; Slagle, E.C. 1961. Design and maintenance of operating room air conditioning and ventilation systems. Amer. J. Public Health 51:1896-1906.

701

Songer, J.R.; Sullivan, J.F.; Hurd, J.W. 1963. Testing air-filtering systems: I. Procedure for testing high-efficiency air filters on exhaust systems. Appl. Microbiol. 11:394-397.

702

Swearingen, T.G. 1962. Diverse lab facilities require flexibility in air conditioning. Heating, Piping Air Conditioning 34:132-134.

703

Warner, P.; Doherty, J. 1963. Bacteriology of air conditioning ducts with special reference to operating rooms. Can. Med. Ass. J. 88:416-419.

704

Whitfield, W.J. 1963. State-of-the-art (contamination control) and laminar flow concept. Conference on Clean Standards, Sandia Corp., Albuquerque, N.M. 9 p.

705

Wolman, A. 1947. Recent studies on disinfection of air in military establishments. Amer. J. Public Health 37:170.

706

York, J.E. 1953. Ventilation and air conditioning for laboratories. Heating Ventilating 50:30-36.

D. GERMICIDAL ULTRAVIOLET IRRADIATION

707

Bourdillon, R.B., et al. 1949. III. Air disinfection by ultraviolet radiation, p. 177-189. In R.B. Bourdillon, et al. (ed.) Studies in air disinfection. Medical Research Council Report, Ser. No. 262, His Majesty's Stationery Office, London.

708

Gushchina, N.B.; Smolov, N.M. 1957. Primenie bakteretsidnykh lamp dlia dezinfektsii vozdukh. (The application of the bactericidal lamp for disinfection of air.) Svetotekhnika 4:1-3.

709

Harstad, J.B.; Dacker, H.M.; Wedum, R. 1954. Use of ultraviolet irradiation in a room air conditioner for removal of bacteria. Appl. Microbiol. 2:146-151.

710

Hart, D. 1946. Sterilization of air in the operating room with bactericidal radiation. Arch. Surg. 41:344-350.

711

Hart, D. 1940. Bactericidal ultraviolet radiation in the operating room. J. Amer. Med. Ass. 172:1019-1020.

712

Hoffman, J.C.; Nagw, R. 1960. Engineering fundamentals of air sanitation with ultraviolet light. I. Air Eng., October:30-36; II. Air Eng., November:43-46; III. Air Eng., December:46-49.

713

Howard, J.M.; Barker, W.F.; Gultertson, W.R.; Grotzinger, P.J.; Irvine, V.M.; Keenan, R.J.; Ravdin, E.G. 1964. Bactericidal effect of ultraviolet radiation in the operating room and various other facilities. Ann. Surg. (Suppl.) 16:1-10.

714

Keller, L.R. 1939. Bactericidal effects of ultraviolet radiation produced by low pressure mercury lamps. *J. Appl. Physiol.* 10:624-630.

715

Laurell, G.; Ronge, H. 1955. Ultraviolet air disinfection in a children's hospital, a technical and bacteriological study. *Acta Paediat.* 44:407-425.

716

Lurie, M.B. 1944. The prevention of natural air-borne contagion of tuberculosis in rabbits by ultraviolet irradiation. *J. Exp. Med.* 79:559-572.

717

Miller, O.T.; Schmitt, R.F.; Phillips, G.B. 1955. Applications of germicidal ultraviolet in infectious disease laboratories: I. Sterilization of small volumes of air by ultraviolet radiation. *Amer. J. Public Health* 45:1420-1423.

718

Nagy, R.; Mouromseff, G.; Rixton, F.H. 1954. Disinfecting air with the sterilizing lamps. *Heating, Piping Air Conditioning* 26:82-87.

719

Phillips, G.B.; Hanel, E., Jr. 1960. Use of ultraviolet radiation in microbiological laboratories. United States Library of Congress. P.B. 147 043. Listed in U.S. Government Res. Rep. 34, August 19, 1960, p. 122.

720

Phillips, G.B.; Novak, F.E. 1956. Applications of germicidal ultraviolet in infectious disease laboratories: II. An ultraviolet pass-through chamber for disinfecting single sheets of paper. *Appl. Microbiol.* 4:95-96.

721

Phillips, G.B.; Reitman, M.; Mullican, C.L.; Gardner, G.D., Jr. 1957. Applications of germicidal ultraviolet in infectious disease laboratories: III. The use of ultraviolet barriers on animal cage racks. *Proc. Animal Care Panel* 7:235-244.

722

Rentschler, H.C. 1942. Bactericidal action of ultraviolet radiation on air-borne organisms. *J. Bacteriol.* 44:85-94.

723

Short, D.J. 1954. Methods used for maintenance of laboratory animals by National Institute for Medical Research, Mill Hall, London, England, p. 127-134. *Proc. 5th Annu. Meeting Animal Care Panel.*

724

Stratford, B.C. 1963. Air disinfection by ultraviolet irradiation. *Med. J. Australia* 50:717-722.

725

Summer, W. 1953. Odor control with ultraviolet radiation. *Food Manuf.* 28:230-235.

726

Wedum, A.G.; Hanel, E., Jr.; Phillips, G.B. 1956. Ultraviolet sterilization in microbiological laboratories. *Public Health Rep.* 71:331-336.

E. AEROSOL TEST FACILITIES

727

Baurmash, L.; Bryan, F.A.; Dickinson, R.W.; Burke, W.C., Jr. 1953. A new exposure chamber for inhalation studies. *Amer. Ind. Hyg. Ass. Quart.* 14:26-30.

728

Bourdillon, R.B., et al. 1948. IX. Animal tests with infective aerosols, p. 291-310. In R.B. Bourdillon, et al. (ed.) *Studies in air hygiene*. Medical Research Council Report Series No. 262, His Majesty's Stationery Office, London.

729

Brown, J.E.; Griffith, W.R. 1958. Syringe device for studies on bacterial and other aerosols. *A.M.A. Arch. Ind. Health* 18:415-421.

730

Druett, H.A.; May, K.R. 1952. A wind tunnel for the study of air-borne infections. *J. Hyg.* 50:69-81.

731

Logolak, F.M. 1953. A quantitative study of the infectivity of murine pneumonitis virus in mice infected in a cloud chamber of improved design. *J. Infect. Dis.* 92:240-247.

732

Goldberg, L.J.; Watkins, H.M.S.; Boerke, E.E.; Chatigny, M.A. 1958. The use of a rotating drum for the study of aerosols over extended periods of time. *Amer. J. Hyg.* 68:85-93.

733

Griffin, C.W.; Kantzes, H.L.; Ludford, P.M.; Pelczar, M.J. 1956. Studies of aerosols with a simple cloud-chamber technique. *Appl. Microbiol.* 4:17-20.

734

Henderson, D.W. 1952. An apparatus for the study of air-borne infection. *J. Hyg.* 50:53-68.

735

Jemski, J.V.; Phillips, G.B. 1964. Aerosol challenge of animals, p. 273-341. In W.I. Gay (ed.) *Methods in animal experimentation*. Academic Press, Inc., New York.

736

Leif, W.R.; Krueger, A.P. 1950. Studies on the experimental epidemiology of respiratory infections: I. An apparatus for the quantitative study of airborne respiratory pathogens. *J. Infect. Dis.* 87:103-116.

737

Middlebrook, G. 1952. An apparatus for airborne infection of mice. *Proc. Soc. Exp. Biol. Med.* 80:105-110.

738

Norseth, H.G.; Mitchell, R.I. 1963. The dynamic dilution of aerosols by mixing with clean air. *Ann. N.Y. Acad. Sci.* 105:88-133.

739

Porter, F.E.; Crider, W.L.; Mitchell, R.I.; Margard, W.L. 1963. The dynamic behavior of aerosols. *Ann. N.Y. Acad. Sci.* 105:45-67.

740

Fribnow, J.F.; Silverman, M.S. 1963. Construction of a modified Henderson apparatus. *U.S. Navy Radiol. Defense Lab. Technol. Rep.* 629:1-10.

741

Ray, F.E., Jr. 1959. A freon-tight chamber for quantitative studies of aerosols of infectious microorganisms. *Abstr. Meeting Amer. Chem. Soc.* 136: 27A.

742

Riley, R.L.; Wells, W.F.; Mills, C.C.; Nyka, W.; McLean, R.L. 1957. Air hygiene in tuberculosis: Quantitative studies of infectivity and control in a pilot ward. *Amer. Rev. Tuberc. Pulmonary Dis.* 75:420-431.

743

Robertson, O.H.; Puck, T.T.; Wise, J. 1946. The construction and operation of experimental rooms for the study of air-borne infection. *J. Exp. Med.* 84: 559-567.

744

Roessler, W.G.; Kautter, D.A. 1962. Modifications to the Henderson apparatus for studying airborne infections: Evaluation using aerosols of *Listeria monocytogenes*. *J. Infect. Dis.* 110: 17-22.

745

Rosebury, T. 1958. *Experimental air-borne infections*. The Williams and Wilkins Company, Baltimore. 222 p.

746

Tanner, H.G. 1963. Evanesence of cloud-chamber aerosols. *Ann. N.Y. Acad. Sci.* 105:27-44.

747

Terskikh, I.I.; Chervonskii, V.I.; Bolotovskii, V.M. 1958. Design of a chamber for use with virus and bacterial aerosol. I. (Patent No. 107971). *Zh. Mikrobiol. Epidemiol. Immunobiol.* 29:1500-1504.

748

Urban, E.C.J. 1954. Two chambers for use in exposing laboratory animals to the inhalation of aerosols. *Arch. Ind. Hyg. Occup. Med.* 9:62-68.

749

U.S. Public Health Service. 1959. Exposure chambers for research in animal inhalation, (Public Health Monograph 57). U.S. Government Printing Office, Washington, D.C.

750

Vershigora, A.E. 1958. A gas tight chamber for experimental work with bacterial aerosols. *Zh. Mikrobiol. Epidemiol. Immunobiol.* 29:955-957.

751

Weiss, E.; Segeler, J.C. 1952. A cloud chamber for the uniform airborne inoculation of mice. *J. Infect. Dis.* 90:13-20.

752

Wells, W.F. 1940. An apparatus for the study of experimental air-borne disease. *Science* 91:172-174.

753

Wells, W.F. 1948. On the mechanics of droplet nuclei infection: I. Apparatus for the quantitative study of droplet nuclei infection of animals. *Amer. J. Hyg.* 47:1-10.

754

Wells, W.F.; Ratcliffe, H.L.; Crumb, C. 1948. On the mechanics of droplet nuclei infection: II. Quantitative experimental air-borne tuberculosis in rabbits. *Amer. J. Hyg.* 47:11-28.

755

Willard, D.H.; Blair, W.J.; Temple, L.A.; Smith, V.H. November 1958. Techniques for exposure of mice to aerosols of radioactive particles. U.S. Atomic Energy Comm. Doc. H.W.-52368.

756

Wolfe, E.K., Jr. 1961. Quantitative characterization of aerosols. *Bacteriol. Rev.* 25:194-202.

757

Wolockow, H.; Chatigny, M.; Speck, E.E. 1957. Studies on experimental epidemiology of respiratory infections: VII. Apparatus. *J. Infect. Dis.* 100:15-17.

758

Yarnick, W.S. 1959. Apparatus for study of bacterial and viral aerosols. *Bull. Inventions* 21, Comm. Inventions Min. USSR.

759

Zhaliko-Titarenko, V.P. 1961. Construction of a chamber of variable capacity for the study of bacterial and virus aerosols. *Zh. Mikrobiol. Epidemiol. Immunobiol.* 32:546-554.

F. PROCESS PRODUCTION OF MICROORGANISMS

760

Achorn, G.B., Jr.; Bokesch, E.R.; Dapper, E.R.; Lebherz, R.W., Jr.; Metcalfe, S.N., Jr.; Rawson, A.J.; Smith, J.R.E.; Schwab, J.L. 1959. Equipment for cultivation of fastidious microorganisms. *J. Biochem. Microbiol. Technol. Eng.* 1: 27-36.

761

Achorn, G.B., Jr.; Schwab, J.L. 1948. A method for the aeration of liquid cultures of microorganisms. *Science* 107:377-388.

762

Buckland, F.E. 1945. Scrub-typhus vaccine; production. *Lancet* 2:734-737.

763

Edebo, L.; Heden, C.G.; Holme, T.; Zacharias, B. 1962. Laboratory equipment for growing aerobic bacteria in high yields. *Acta Pathol. Microbiol. Scand.* 55:91-98.

764

Ericsson, H.; Heden, C.G.; Malmgren, P. 1954. Studies on the cultivation of microorganisms on semi-industrial scale: III. Plastic coatings as an aid in the production of diphtheria toxin in metal tanks. *Acta Pathol. Microbiol. Scand.* 35:455-457.

- 765
Heden, C.G. 1957. Pulsating aeration of microbial cultures. *Nature* 179:324-325.
- 766
Heden, C.G. 1958. A biological pilot plant designed for a high degree of flexibility. *Nord. Med.* 60:1090-1098.
- 767
Heden, C.G. 1958. Large-scale dialysis bag culture of bacteria. Abstr. VII Intern. Congr. Microbiol. (Abstr. 24e).
- 768
Heden, C.G.; Malmborg, A.S. 1958. Active aeration of small culture volumes in pulsaerator tubes. *Acta Pathol. Microbiol. Scand.* 44:405-412.
- 769
Heden, C.G.; Malmgren, B. 1954. Equipment for cultivation of microorganisms. *Ind. Eng. Chem.* 46:1747-1751.
- 770
Heden, C.G.; Malmgren, B. 1958. A continuous heat-sterilizer for liquid media. Abstr. VII Intern. Congr. Microbiol. (Abstr. 24f).
- 771
Heden, C.G.; Malmgren, B.; Sundstrom, K.E.; Tornquist, B. 1952. Studies on the cultivation of microorganisms on a semi-industrial scale: II. Construction of the equipment. *Acta Pathol. Microbiol. Scand.* 30:284-303.
- 772
Malmgren, B. 1958. The bacteriological department of the Karolinska Institute. *Nord. Med.* 60:1077-1089.
- 773
Malmgren, B.; Heden, C.G. 1952. Studies on the cultivation of microorganisms on a semi-industrial scale: I. General aspects of the problem. *Acta Pathol. Microbiol. Scand.* 30:227-229.
- 774
Pfeifer, V.F.; Vojnovich, C.; Maister, H.G.; Sohns, V.E.; Heger, E.N.; Bogart, W.M. 1948. Pilot plant production of ground Serratia marcescens. *Ind. Eng. Chem.* 50:1143-1148.
- 775
Tanner, H.G. 1957. New type of mill for refined chemicals. *Ind. Eng. Chem.* 49:170-173.

VI. LABORATORY EQUIPMENT

A. AIR SAMPLERS

776

Albrecht, J. 1955. Quantitative estimation of bacterial aerosols. *Z. Aerosol-Forsch. Therapie* 4:3-11.

777

Andersen, A.A. 1958. New sampler for the collection, sizing, and enumeration of viable airborne particles. *J. Bacteriol.* 76:471-484.

778

Andersen, A.A.; Andersen, R.R. 1962. A monitor for airborne bacteria. *Appl. Microbiol.* 10:181-184.

779

Asset, G. 1958. Nasal sampling of aerosols in experimental animals. *A.M.A. Arch. Ind. Health* 18:460-463.

780

Batchelor, H.W. 1960. Aerosol samplers, p. 31-64. In Wayne W. Umbreit (ed.) *Advances in applied microbiology*, Vol. 2. Academic Press, New York.

781

Berry, C.M. 1941. An electrostatic method for collecting bacteria from air. *Public Health Rep.* 56:2044-2051.

782

Bourdillon, R.B., et al. 1948. I. Methods of sampling air for bacteria, p. 12-53. In R.B. Bourdillon, et al. (ed.) *Studies in air hygiene*. Medical Research Council Report Series No. 262, His Majesty's Stationery Office, London.

783

Brown, C.E.; Griffith, W.R. 1958. Syringe device for studies on bacterial and other aerosols. *A.M.A. Arch. Ind. Health* 18:415-421.

784

Cember, H.; Hatch, T.; Watson, J.A. 1953. Dust sampling with a rotating thermal precipitator. *Amer. Ind. Hygiene Ass. Quart.* 14:91.

785

Cown, W.B.; Kethley, T.W.; Fincher, E.L. 1957. The critical orifice liquid impinger as a sampler for bacterial aerosols. *Appl. Microbiol.* 5:119-124.

786

Dahlgren, C.M.; Decker, H.M.; Harstad, J.B. 1961. A slit sampler for collecting T-3 bacteriophage and Venezuelan equine encephalomyelitis virus: I. Studies with T-3 bacteriophage. *Appl. Bacteriol.* 9:103-105.

787

Decker, H.M.; Hoffman, R.K.; Wedum, A.G. 1959. To the editor - Re: Air sampling and other control techniques in study of hospital staphylococcal infection. *Amer. J. Public Health* 49:947-948.

788

Decker, H.M.; Kuehne, R.W.; Buchanan, L.M.; Porter, R. 1958. Design and evaluation of a slit-incubator sampler. *Appl. Microbiol.* 6:398-400.

789

Decker, H.M.; Wilson, M.E. 1954. A slit sampler for collecting airborne microorganisms. *Appl. Microbiol.* 2:267-269.

790

Du Buy, H.G.; Crisp, L.R. 1944. A Sieve device for sampling air-borne microorganisms. *Public Health Rep.* 59:829-832.

791

Du Buy, H.G.; Hollaender, A.; Lackey, M.D. 1945. A comparative study of sampling devices for air-borne microorganisms. *Public Health Rep., Suppl.* No. 184, U.S. Government Printing Office, Washington, D.C. 40 p.

792

Ewing, C.L.; Siegmund, H.B.; Thiell, W.W. 1960. Preliminary experience with the Andersen aerosol sampler with special reference to its use in an ice cream plant. *Amer. J. Public Health* 50:880-881.

793

Fulton, R.A.; Phinney, F.S. 1950. Construction of a simple air flow-meter. U.S. Dept. Agr. Res. Admin., Bur. Entomol. Plant Quarantine Pamphlet ET-287.

794

Gentry, R.F.; Mitrovic, M.; Bubash, G.R. 1962. Application of Andersen sampler in hatchery sanitation. Poultry Sci. 41:794-804.

795

Goetz, A. 1953. Application of molecular filter membranes to the analysis of aerosols. Amer. J. Public Health 43:150-159.

796

Goldberg, L.J.; Scheckmeister, I.L. 1951. Studies on the experimental epidemiology of respiratory infections: V. Evaluation of factors related to slit sampling of air-borne bacteria. J. Infect. Dis. 88:243-247.

797

Greenburg, L.; Bloomfield, J.J. 1932. The impinger dust sampling apparatus as used by the United States Public Health Service. Public Health Rep. 47:654-675.

798

Greenburg, L.; Smith, G.W. 1922. A new instrument for sampling aerial dust. Bur. Mines Rep. Invest. No. 2392. 3 p.

799

Hall, L.B.; Decker, H.M. 1960. Environmental aspects of Staphylococcal infections acquired in hospitals: IV. Procedures applicable to sampling of the environment for hospital use. Amer. J. Public Health 50:491-496.

800

Herman, L.G.; Mirelli, F.A. 1961. Air sampling techniques in the hospital environment. Bacteriol. Proc. 114.

801

Hollaender, A.; DallaValle, J.M. 1939. A simple device for sampling air-borne bacteria. Public Health Rep. 54:574-577.

802

Kethley, T.W.; Gordon, M.T.; Orr, C., Jr. 1952. A thermal precipitator for aerobacteriology. Science 116:368-369.

803

Kuehne, R.W.; Decker, H.M. 1957. Studies on continuous sampling of *Serratia marcescens* using a slit sampler. Appl. Microbiol. 5:321-323.

804

Kuehne, R.W.; Gochanour, W.S., Jr. 1961. A slit sampler for collecting T-3 bacteriophage and Venezuelan equine encephalomyelitis virus: II. Studies with Venezuelan equine encephalomyelitis virus. Appl. Microbiol. 9:106-107.

805

Lemon, H.M. 1943. A method for collection of bacteria from air and textiles. Proc. Soc. Exp. Biol. Med. 54:298-301.

806

Lester, W., Jr. 1955. How to evaluate bacterial air samplers. Public Health Rep. 70:195-196.

807

Lidwell, O.M. 1950. Slit sampler for long period sampling of air for bacteria. Lancet 258:130-131.

808

Lidwell, O.M. 1959. Impaction sampler for size grading air-borne bacteria-carrying particles. J. Sci. Instr. 36:3-8.

809

Lippmann, S.M. 1961. A compact cascade impactor for field survey sampling. Amer. Ind. Hyg. Ass. J. 22:348-353.

810

Luckiesh, M.; Taylor, A.H.; Holladay, L.L. 1946. Sampling devices for air-borne bacteria. J. Bacteriol. 52:55-65.

811

Malligo, J.E.; Hoine, L.S. 1964. Single stage impaction device for particle sizing biological aerosols. Appl. Microbiol. 12:32-36.

812

May, K.R. 1945. The cascade impactor, an instrument for sampling coarse aerosols. *J. Sci. Instr.* 22:187-195.

813

May, K.R. 1964. Calibration of a modified Andersen bacterial sampler. *Appl. Microbiol.* 12:37-45.

814

May, K.R.; Druett, H.A. 1953. The pre-impinger, a selective aerosol sampler. *Brit. J. Ind. Med.* 10:142-151.

815

May, K.R.; Harper, C.J. 1957. The efficiency of various liquid impinger samplers in bacterial aerosols. *Brit. J. Ind. Med.* 14:287-297.

816

Moulton, S.; Puck, T.T.; Lemon, H.M. 1943. An apparatus for determination of the bacterial content of air. *Science* 97:51-52.

817

Orr, C., Jr.; Gordon, M.T.; Kordecki, M.C. 1956. Thermal precipitation for sampling air-borne microorganisms. *Appl. Microbiol.* 4:116-118.

818

Paddy, S.M. 1954. An improved slit sampler for aerobiological investigations. *Kansas Acad. Sci.* 57:157-163.

819

Penny, G.W. 1937. A new electrostatic precipitator. *Elec. Eng.* 56:195.

820

Ranz, W.E.; Wong, J.B. 1952. Jet impactor for determining the particle size distribution of aerosols. *Arch. Ind. Hyg. Occup. Med.* 5:464-477.

821

Sawyer, K.F.; Walton, W.H. 1950. The confuge - a size separating sampling device for air-borne particles. *J. Sci. Instr.* 27:272-276.

822

Schadt, C.; Cadle, R.D. 1957. Critical comparison of collection efficiencies of commonly used aerosol sampling devices. *Anal. Chem.* 29:864-868.

823

Solberg, A.N.; Shaffer, H.C.; Kelly, G.A. 1956. The collecting of air-borne microorganisms. *Ohio J. Sci.* 56:305.

824

Sonkin, L.S. 1946. A modified cascade impactor: a device for sampling and sizing aerosols of particles below one micron in diameter. *J. Ind. Hyg. Toxicol.* 28:269-272.

825

Sonkin, L.S. 1950. Application of the cascade impactor to studies of bacterial aerosols. *Amer. J. Hyg.* 51:319-342.

826

Stern, S.C.; Steele, D.R.; Bolduan, O.E.A. 1958. A large volume electrostatic air sampler. *A.M.A. Arch. Ind. Health* 18:30-33.

827

Tyler, M.E.; Shipe, E.L.; Painter, R.B. 1959. Bacterial aerosol sampler: I. Development and evaluation of the all-glass impinger. II. Development and evaluation of the Shipe sampler. III. Comparison of biological and physical effects in liquid impinger samplers. *Appl. Microbiol.* 7:337-362.

828

Wilcox, J.D. 1953. Design of a new five-stage cascade impactor. *Arch. Ind. Hyg. Occup. Med.* 7:376-382.

829

Wolf, H.W.; Skaliy, P.; Hall, L.B.; Harris, M.M.; Decker, H.M.; Buchanan, L.M.; Dahlgren, C.M. 1959. Sampling microbiological aerosols. Public Health Service Publication 686, U.S. Government Printing Office, Washington, D.C. 53 p.

B. AEROSOL GENERATORS

30
ollison, W.E. 1935. Inhalation therapy technique. Heineman, London. 77 p.

31
avis, J.M. April 1951. A vibrating apparatus for producing drops of uniform size. U.S. Dept. Agr., Div. Forest Insect Invest., Rep. ET-295 U.S. Bur. Entomol. Plant Quart. 2 p.

32
Jimmick, R.L. 1959. Jet disperser for compacted powders in the one- to ten-micron range. A.M.A. Arch. Ind. Health 20:18-24.

33
Dimmock, N.A. 1951. Production of uniform droplets. Nature 166:686-687.

834
Marsh, P.V. 1963. Automatic aerosol delivery for inhalation experiments. Arch. Environ. Health 6:649-650.

835
May, K.R. 1949. An improved spinning top homogeneous spray apparatus. J. Appl. Phys. 20:932-938.

836
Walton, W.H.; Prewett, W.L. 1949. The production of sprays and mists of uniform drop sizes by means of spinning-disc type sprayers. Proc. Phys. Soc. 62B:341-350.

837
Zentner, R.J. 1961. Techniques of aerosol formation. Bacteriol. Rev. 25:188-193.

C. MASKS AND RESPIRATORS

838
Abramson, S. 1956. Experimental airborne infection, a comparison of different masks in the protection of rabbits against inhalation infection with tubercle bacilli. Amer. Rev. Tuberc. 73:315-329.

839
Adams, R.; Fahlman, B.; Dube, E.W.; Dube, F.J.C.; Read, S. 1959. Control of infections within hospitals. J. Amer. Med. Ass. 169:1557-1567.

840
Adams, R.; Fahlman, B.; Lord, J. 1959. New fashions in surgical attire. Amer. J. Nursing 59:1101-1107.

841
Arnold, L. 1938. A new surgical mask: A bacteriologic air filter. Arch. Surg. 37:1008.

842
Barber, M.A.; Teague, O. 1912. Studies on pneumonic plague and plague immunization: XII. Some experiments to determine the efficacy of various masks for protection against pneumonic plague. Philippine J. Trop. Med. 7:255-270.

843
Bourdillon, R.B., et al. 1948. VI. Masks, p. 224-232. In R.B. Bourdillon, et al. (ed.) Studies in air hygiene. Medical Research Council Report Series No. 262, His Majesty's Stationery Office, London.

844
Engelfried, J.J.; Farrar, F.W. 1948. A study of surgical masks. U.S. Navy Med. Bull. 41:524.

845
Guyton, H.G.; Buchanan, L.M.; Lense, F.T. 1956. Evaluation of respiratory protection of contagion masks. Appl. Microbiol. 4:141-143.

846
Guyton, H.G.; Decker, H.M. 1963. Respiratory protection provided by five new contagion masks. Appl. Microbiol. 11:66-68.

847
Guyton, H.G.; Decker, H.M.; Anton, G.T. 1959. Emergency respiratory protection against radiological and biological aerosols. A.M.A. Arch. Ind. Health 20: 91-95.

848
Guyton, H.G.; Lense, F.T. 1956. Methods for evaluating respiratory protective masks and their component parts. A.M.A. Arch. Ind. Health 14:246-249.

849
Hirshfeld, J.W.; Laube, P.J. 1941. Surgical mask, an experimental study. Surgery 9:720.

850
Hyatt, E.C. 1963. Air purifying respirators for protection against airborne radioactive contaminants. Health Phys. 9:425-432.

851
Lurie, M.B.; Abramson, S. 1949. The efficiency of gauze masks in the protection of rabbits against the inhalation of droplet nuclei of tubercle bacilli. Amer. Rev. Tuberc. 59:1-9.

852
McNett, E.H. 1949. The face mask in tuberculosis. Amer. J. Nursing 49:32.

853
Morelli, R. 1963. Respiratory protective equipment. Securitas 48:3-22.

854
Rooks, R.; Cralley, I.J.; Barnes, M.E. 1941. Hospital masks: their bacterial filtering efficiency and resistance to air flow. Pub. Health Rep. 56:1411-1419.

855
Riley, R.L. Jan. 1959. Protective measures - reasonable or ritualistic. Nursing Outlook 7, 2 p.

D. MISCELLANEOUS EQUIPMENT

856
Anonymous. 1956. Personnel safety through plastics. Mod. Plastics 32:71.

857
Borger, K. 1960. A dissection table for guinea pigs, rats, and mice. Zentr. Bakterirol. Parasitenk, Abt. I. Orig. 177:429-431.

858
Cohn, M.L.; Middlebrook, G. 1963. Carbon dioxide-impermeable plastic bags for artificial cultivation of tubercle bacilli. Amer. Rev. Resp. Dis. 87:292-293.

859
Comings, E.W.; Adams, C.F.; Snipes, E.F. 1948. High velocity vaporizers. Ind. Eng. Chem. 40:74-76.

860
Darlow, H.M. 1959. A device for flaming platinum loops. Lancet 2:651.

861
Edwards, J.W.; Sloan, R.F.; Bleicher, N.; Ashley, F.L. 1959. An ether chamber for small laboratory animals. Proc. Animal Care Panel 9:71-73.

862
Fagle, D.L.; McClung, L.S. 1960. Bacteriology inoculating device useful in the biology laboratory. Amer. Biol. Teacher 22:337-338.

863
Garris, L.M. 1962. Convenient mouse and rat holder for use in various laboratory procedures. J. Lab. Clin. Med. 60:354-356.

864
Goldwasser, R.; Shelesnyak, M.C. 1953. A syringe carrier and egg clamp for intravenous inoculation of chick embryo. Science 118:47-48.

865
Hahon, N.; Ratner, M. 1957. Illuminator for chorioallantoic membrane pock counting. J. Bacteriol. 74:696-697.

866
Hilleman, M.R.; Taylor, R.O. 1958. A safe high speed blender for processing infectious materials. J. Lab. Clin. Med. 51:977-980.

867
Kaminsky, J.H. 1963. A plate spacer and rack for the anaerobic incubation of petri plates. Can. J. Med. Technol. 25:20-21.

868

Kantorowicz, O.; Rees, R.J.W. 1950. Safety screen for protection against splashes during inoculation of small animals. *J. Pathol. Bacteriol.* 62: 448-449.

869

Kohn, A. 1961. An apparatus for automatic inoculation of bacterial cultures. *J. Bacteriol.* 82:995-996.

870

Kotrba, W. 1963. A simple aid for pipetting. *Munchen Med. Wochens.* 105:688-689.

871

Lamanna, C. 1960. Use of autoclavable plastic for do-it-yourself solutions to laboratory problems of safety. *J. Lab. Clin. Med.* 55:319-321.

872

Landolt, R.E.; Peters, D.C.; Davenport, P. 1962. A device to facilitate the restraint of laboratory animals. *Proc. Animal Care Panel* 12:121-124.

873

Leif, W.R.; Wolochow, H. 1958. An electronic relay colony counter for virulent organisms. *Amer. J. Med. Technol.* 24:6-7.

874

Lincoln, R.E.; Roth, N.G. 1961. A decontaminator-washer-dryer-powderer for surgical gloves. *Appl. Microbiol.* 9:81-84.

875

McCarter, J.A. 1952. A simple pipetting device. *Science* 115:552.

876

O'Hern, E.M. 1962. The use of plastic flasks for culturing fungi. *J. Invest. Dermatol.* 38:267-270.

877

Olson, F.C.W.; Biggs, E.; Jennings, B.H. 1947. Portable glycol vaporizers for air disinfection. *Science* 105:23-24.

878

Orlicki, J. 1951. A simply constructed automatic pipette for serial dilution. *Can. J. Med. Technol.* 13:78-79.

879

Phillips, G.B.; Hanel, E., Jr.; Miller, F.E.; Miller, L.F. 1955. Magnetically mixing of test-tube dilutions. *Appl. Microbiol.* 3:258-267.

880

Powell, M.E. 1949. A simplified method for sealing petri dishes. *J. Bacteriol.* 58:548.

881

Puck, T.T. 1947. The mechanism of aerial disinfection by glycols and other chemical agents, I and II. *J. Exp. Med.* 85:729-757.

882

Reitman, M.; Frank, M.A.; Alg, R.L.; Wedum, A.G. 1952. Infectious hazards of the high speed blender and their elimination by a new design. *Appl. Microbiol.* 1:14-17.

883

Reitman, M.; Frank, M.A.; Alg, R.L.; Miller, W.S. 1954. Modifications of the high-speed blender. *Appl. Microbiol.* 2:173.

884

Reynolds, D.J. 1960. An escape-proof mosquito egg harvester. *Mosquito News* 20:384-386.

885

Rosenzweig, A.L. 1954. An agitator for bacteriologic specimens. *Amer. Rev. Tuberc.* 70:176-177.

886

Shockman, G.D. 1962. Modified centrifuge - shaker for the disruption of bacteria and yeasts. *Biochem. Biophys. Acta* 59:234-235.

887

Smith, D.A. 1961. A multiple inoculation device for use with fluids. *J. Appl. Bacteriol.* 24:131-133.

888

Stepanov, G.P. 1960. Sterilization of Franche needles by heating over a flame for the prevention of virus hepatitis. Zh. Mikrobiol. Epidemiol. Immunobiol. 31:153-156.

889

Taylor, F.; Ihrig, H.K.; Greiff, D.; Donohoe, H.B. 1961. An inexpensive accurate "injection gun." Appl. Microbiol. 9:65-66.

890

Wearne, J.T. 1960. Two useful modifications for the Seligson pipetting system. J. Clin. Pathol. 13:534.

891

Weathersby, A.B. 1961. One hand manipulator for hypodermic syringes. Amer. J. Clin. Pathol. 36:94.

892

Wedum, A.G. 1950. Non-automatic pipetting devices for the microbiological laboratory. J. Lab. Clin. Med. 35:648-651.

893

Wescott, R.B. 1960. A device for weighing monkeys. Proc. Animal Care Panel 12:117-120.

894

Williams, A.M. 1962. Synthetic fiber battings as plugging materials in microbiology. J. Bacteriol. 84:875-876.

895

Wright, J.F. 1959. Treatment of captive wild animals using an automatic projectile-type syringe. Vet. Med. 54:32-33.

VII. VAPOR PHASE DISINFECTANTS

A. BETA-PROPIOLACTONE

896

Alg, R.L.; Harris, G.J.; Barbeito, M.E.
1961. Disinfection with BPL. Soap
Chem. Specialties 40:97-100.

897

Allen, H.F.; Murphy, J.T. 1960.
Sterilization of instruments and
materials with beta-propiolactone.
J. Amer. Med. Ass. 172:1759-1763.

898

Bruch, C.W. 1961. Decontamination of
enclosed spaces with beta-propiolactone
vapor. Amer. J. Hyg. 73:1-9.

899

Celanese Corp. of America. Beta-
propiolactone. Celanese Corp. of
America, 180 Madison Ave., New York.
(Brochure)

900

Claiberg, K.W. 1961. Investigations
of the replacement of steam disinfection
by directed flowing disinfecting
gases: II. Apparatus for the testing
of bactericidal gases. Discussion of
principles. Arch. Hyg. Bakteriologie
149:153-160.

901

Curran, H.R.; Evans, F.R. 1956. The
effects of BPL on bacterial spores.
J. Infect. Dis. 99:212-213.

902

D'Allessandro, G.; Oddo, F.G.; Inse-
rillo, G. 1957. Further investigations
on the inactivation of polio viruses by
beta-propiolactone. Biol. Abstr. 31:
1948.

903

D'Allessandro, G.; Oddo, F.G.; Inse-
rillo, G. 1960. Inactivation of polio
virus by β -propiolactone. Giorn.
Microbiol. 8:151-152.

904

Dawson, F.W.; Hearn, H.J.; Hoffman, R.
1959. Virucidal activity of beta-
propiolactone vapor: I. Effect of
propiolactone vapor on the
equine encephalomyelitis virus. Appl.
Microbiol. 7:199-201.

905

Dawson, F.W.; Janssen, R.J.; Hoffman,
R.K. 1960. Virucidal activity of beta-
propiolactone vapor: II. Effect on the
etiologic agents of smallpox, yellow
fever, psittacosis, and Q fever. Appl.
Microbiol. 8:39-41.

906

Feazel, C.R.; Lang, E.W. 1959. New
vapor phase disinfectant. Soap Chem.
Specialties 35:113.

907

Fellowes, O.N.; Edward, A.G.; Tesler,
J.; Poppensiek, G.C.; Sharp, J.H. 1959.
The inactivation of foot-and-mouth dis-
ease virus, Type A-119, with beta-
propiolactone. Amer. J. Vet. Res. 20:
922-925.

908

Glick, C.A.; Gremillion, G.G.; Palmer,
G.A. 1961. Practical methods and prob-
lems of steam and chemical steriliza-
tion. Proc. Animal Care Panel 11:47-54.

909

Hagiwara, S. 1961. Inactivation of
phages by β -propiolactone. Sapporo Med.
J. 20:16-18.

910

Huffman, R.K.; Marchewsky, B. 1960.
Beta-propiolactone vapor as a dis-
infectant. Appl. Microbiol. 6:335-336.

911

Hopper, S.H.; Doralis, D.G. 1961.
Modification of staphylococcal enter-
toxins with beta-propiolactone. Bac-
teriol. Proc. 61:19.

- 912
Huddleson, I. 1955. Effect of beta-propiolactone on cells of three colonial types of brucella. *Quart. Bull. Mich. Agr. Exp. Sta.* 37:574-580.
- 913
Kelly, A.R.; Hartman, F.W.; Rupe, C.E. 1957. The toxicology of beta-propiolactone, p. 387-406. In Frank W. Hartman, Gerald A. LoGrippe, John G. Mateer, and James Barron (ed.) *Hepatitis frontiers*. Little, Brown and Co., Boston.
- 914
LoGrippe, G.A. 1957. Beta-propiolactone for the sterilization of biological materials. *Henry Ford Hosp. Med. Bull.* 5:94-99.
- 915
Merck, Sharpe and Dohme. 1958. Use of beta-propiolactone for decontamination of large inclosed spaces. Merck, Sharpe and Dohme, West Point, Pa.
- 916
Palmes, E.D.; Orris, L.; Nelson, N. 1962. Skin irritation and skin tumor production by beta-propiolactone (BPL). *Amer. Ind. Hyg. Ass. J.* 23:257-264.
- 917
Roe, F.J.C.; Salaman, M.H. 1955. Further studies on incomplete carcinogenesis. *Brit. J. Cancer* 9:177-203.
- 918
Roe, F.J.C.; Glendenning, D.M. 1957. The carcinogenicity of beta-propiolactone for mouse skin. *Brit. J. Cancer* 10:357-362.
- 919
Searle, C.E. 1961. Experiments on the carcinogenicity of reactivity of β -propiolactone. *Brit. J. Cancer* 15: 804-811.
- 920
Spiner, D.R.; Hoffman, R.K. 1960. Method for disinfecting large enclosures with beta-propiolactone vapor. *Appl. Microbiol.* 8:152-155.
- 921
Trexler, P.C. 1958. The sterilization of clean protective clothing with peracetic acid and beta-propiolactone. *Bacteriol. Proc.* 35.
- 922
Tyler, W.P.; Beesing, D.W. 1952. Chemical and cryoscopic analysis of beta-propiolactone. *Anal. Chem.* 24:1511.
- 923
Wilmott, Castle. 1959. Beta-propiolactone (BPL). Technical Bulletin No. 0818-1. Wilmott Castle Co., Rochester, N.Y.
- 924
Woodward, M.F.; Clark, A.B. 1960. Hospital decontamination with beta-propiolactone vapor. *U.S. Armed Forces Med. J.* 11:459-463.
- B. ETHYLENE OXIDE
- 925
Allison, L.E. 1951. Vapor phase sterilization of soil with ethylene oxide. *Soil Sci.* 72:341-352.
- 926
Barlow, J.S.; House, H.L. 1956. Ethylene oxide for sterilizing diets. *Science* 123:229.
- 927
Beard, H.C. 1957. Retention of ethylene oxide fumigant by shoes. *A.M.A. Arch. Ind. Health* 15:167.
- 928
Blackwood, J.D.; Erskine, E.B. 1938. Carboxide poisoning. *U.S. Naval Med. Bull.* 36:44-45.
- 929
Burgoyne, J.H.; Burden, F.K. Ethylene oxide explosions. *Nature* 162:181-182.
- 930
Callis, J.J.; Tessler, J.; Fellowes, O.N.; Poppensiek, G.C. 1957. Inactivation of foot-and-mouth disease virus by ethylene oxide gas. *Bacteriol. Proc.* 22.

931
Conrad, D. 1967. Determination of the ignition limits of an ethylene oxide-carbon dioxide-air mixture. Bundesgesundheitsblatt 6:139-141.

932
Cotton, R.T.; Roark, R.C. 1928. Ethylene oxide as a fumigant. Ind. Eng. Chem. 20:805.

933
Eisman, L.P. 1951. Evaluation of ethylene oxide as a sterilizing agent for field use. Military Surg. 109: 29-34.

934
Engley, F.B., Jr. 1958. Gaseous sterilization of heat labile containers. Bacteriol. Proc. 31.

935
Freeman, M.A.R.; Barwell, C.F. 1960. Ethylene oxide sterilization in hospital practice. J. Hyg. 58:337-345.

936
Friedl, J.L.; Ortenzio, L.F.; Stuart, L.S. 1956. The sporicidal activity of ethylene oxide as measured by the A.C.A.C. sporicide test. J. Ass. Offic. Agr. Chem. 39:480-482.

937
Fulton, J.D.; Mitchell, R.B. 1952. Sterilization of footwear. U.S. Armed Forces Med. J. 3:425-429.

938
Gewalt, R.; Fischer, E. 1959. Ein neues gerät zur sterilisation mit gespanntem. Munchen Med. Wochensch. 101:63-65.

939
Glick, C.A.; Gremillion, G.G.; Bodmer, G.A. 1961. Practical methods and problems of steam and chemical sterilization. Proc. Animal Care Panel 11:37-44.

940
Grundy, W.E.; Rdyok, F.J.; Remo, W.J.; Sogen, H.E.; Sylvester, J.C. 1957. The sterilization of plastic intravenous injection equipment by ethylene oxide vapor. J. Amer. Pharm. Ass. 46:439-442.

941
Huenni, E.C.; Affens, W.A.; Lento, H.L.; Yeomans, A.H.; Fulton, R.A. 1959. Non-inflammable formulations for sterilizing sensitive materials. Ind. Eng. Chem. 51:685-688.

942
Hansen, H.N.; Snyder, W.C. 1947. Gaseous sterilization of biological materials for use as culture media. J. pathology 37:369-371.

943
Hawk, E.A.; Mickelson, O. 1955. Nutritional changes in diets exposed to ethylene oxide. Science 121:442.

944
Heicken, K.; Bellinger, H. 1960. Sterilization of catgut with gaseous ethylene oxide. Zentr. Bakteriол. Parasitenk. Abt. I. Orig. 179:113-114.

945
Heseltine, H.K.; Royce, A. 1960. A concentration-time product indicator for fumigations. Pest Technol. (Erie) Feb.:88-92.

946
Hess, L.G.; Tilton, V.V. 1950. Ethylene oxide - hazards and methods of handling. Ind. Eng. Chem. 42:6, 1241-1258.

947
Kaye, S. 1949. The sterilizing action of ethylene oxide: III. The effect of ethylene oxide and related compounds upon bacterial aerosols. Amer. J. Hyg. 50:289-295.

948
Kaye, S. 1950. The use of ethylene oxide for the sterilization of hospital equipment. J. Lab. Clin. Med. 35:827-828.

949
Kaye, S.; Darker, G.D. 1957. Sterilization of surgical, dental, and medical instruments by ethylene oxide vapor. Bacteriol. Proc. 22.

950

Kaye, S.; Irminger, H.F.; Phillips, C.R. 1952. The sterilization of penicillin and streptomycin by ethylene oxide vapor. *J. Lab. Clin. Med.* 40:67-72.

951

Kaye, S.; Phillips, C.R. 1949. The sterilizing action of gaseous ethylene oxide: IV. The effect of moisture. *Amer. J. Hyg.* 50:296-306.

952

Kaye, S.; Surkiewicz, B.F. 1952. Methods and equipment for sterilization with ethylene oxide vapor. Abstr. Papers 122nd Meeting Amer. Chem. Soc., Atlantic City, N.J.

953

Klarenbeek, A.; Van Tangeren, H.A.E. 1954. Virucidal action of ethylene oxide gas. *J. Hyg.* 52:525-528.

954

Manufacturing Chemists Ass. 1951. Properties and essential information for safe handling and use of ethylene oxide, (Chemical Safety Data Sheet SD-38). Manufacturing Chemists Ass., Washington, D.C.

955

Methews, J.; Hofstad, M.S. 1953. The inactivation of certain animal viruses by ethylene oxide (carboxide). *Cornell Vet.* 43:452-461.

956

Meigs, D.P. 1942. Ethylene oxide hazard. *Chem. Eng. News* 20:1318.

957

Newman, L.B.; Colwell, C.A.; Jameson, E.L. 1955. Decontamination of articles made by tuberculous patients in physical medicine and rehabilitation. *Amer. Rev. Tuberc. Pulmonary Dis.* 71:272-278.

958

Perkins, J.J. 1956. Gaseous sterilization with ethylene oxide, p. 325-334. In J.J. Perkins (ed.) *Principles and methods of sterilization*. Charles C. Thomas, Springfield, Ill.

959

Phillips, C.R. 1949. The sterilizing action of gaseous ethylene oxide: II. Sterilization of contaminated objects with ethylene oxide and related compounds. *Amer. J. Hyg.* 50:280-288.

960

Phillips, C.R. 1957. Gaseous sterilization, p. 746-765. In G.F. Reddish (ed.) *Antiseptics, disinfectants, fungicides and sterilization*. Lea and Febiger, Philadelphia, Penna.

961

Phillips, C.R.; Kaye, S. 1949. The sterilizing action of gaseous ethylene oxide: I. Review. *Amer. J. Hyg.* 50:270-279.

962

Roberts, J.L.; Allison, L.E.; Prickett, P.S.; Riddle, K.B. 1943. Preliminary studies on soil sterilization with ethylene oxide. *J. Bacteriol.* 45:40.

963

Royce, A.; Bowler, C. 1959. An indicator control device for ethylene oxide sterilization. *J. Pharm. Pharmacol.* 11:294-298.

964

Royce, A.; Moore, W.K.S. 1955-1956. Occupational dermatitis caused by ethylene oxide. *Brit. J. Ind. Med.* 12-13:169-173.

965

Savan, M. 1955. The sterilizing action of gaseous ethylene oxide on foot-and-mouth disease virus—a preliminary report. *Amer. J. Vet. Res.* 58:158-159.

966

Schley, D.C.; Hoffman, R.K.; Phillips, C.R. 1960. Simple improvised chambers for gas sterilization with ethylene oxide. *Appl. Microbiol.* 8:15-19.

967

Skeehan, R.A.; King, J.K.; Kaye, S. 1956. Ethylene oxide sterilization in ophthalmology. *Amer. J. Ophthalmol.* 42:424-430.

968

Stryker, W.H. 1959. Gas sterilization. Hospital Management March:74-77.

969

Surkiewicz, B.F.; Spiner, D.R.; Kaye, S.; Warshowsky, B. 1956. The use of semi-trailer vans as mobile decontamination chambers for foodstuffs. Chem. Specialties Mfrs. Ass., Proc. Annu. Meeting.

970

Walter, G.W.; Castle, R.D.; MacDonald, R.L. 1957. Ethylene oxide sterilization practicable for hospitals. Hosp. Topics 35:92-93.

971

Wilson, A.J. 1950. Sterilization of plaster bandages with ethylene oxide. J. Amer. Med. Ass. 142:1067-1068.

972

Winge-Heden, K. 1962. Ethylene oxide sterilization without expensive equipment. 8th Intern. Congr. Microbiol., Montreal. Abstr. C24.11, p. 77.

C. PERACETIC ACID

973

Barrett, J.P., Jr. 1959. Sterilizing agents for Lobund flexible film apparatus. Proc. Animal Care Panel 9:127-133.

974

Buffalo Electro-Chemical Co. 1957. Peracetic Acid 40%, (Bull: 4). BECCO Chemical Division, Food Machinery and Chemical Corp., New York. 12 p.

975

Buffalo Electro-Chemical Co. Peracetic acid, a new bacteriacide-fungicide, its application to the food industry, (Bull. 15). BECCO Chemical Divisic., Food Machinery and Chemical Corp., New York.

976

Greenspan, F.P.; Johnson, M.A.; Trexler, P.C. 1955. Peracetic acid aerosols. Proc. Annu. Meeting, Chem. Specialties Mfrs. Ass.

977

Hutchings, I.J.; Xezores, H. 1949. Comparative evaluation of the bactericidal efficiency of peracetic acid, quaternaries, and chlorine-containing compounds. Bacteriol. Proc. 56.

978

Kline, L.B.; Hull, R.N. 1960. The virucidal properties of peracetic acid. Amer. J. Clin. Pathol. 33:30-33.

979

Swern, D. 1949. Organic peracids. Chem. Rev. 45:1-68.

980

Trexler, P.C. 1958. The sterilization of clean protective clothing with peracetic acid and beta-propiolactone. Bacteriol. Proc. 35.

981

Trexler, P.C.; Reynolds, L.I. Flexible film apparatus for the rearing and use of germfree animals. Appl. Microbiol. 5:406-412.

D. FORMALDEHYDE

982

Anonymous. 1958. Disinfection des wagons servant aux transports des animaux. (Disinfection of railway cars used for transport of livestock.) Bull. Offic. Epiz. 49:304.

983

Auerbacker, C.F.; Lebowich, R.J. 1942. Determination of formaldehyde in air. J. Lab. Clin. Med. 28:372-377.

984

Rase, D. 1936. Formaldehyde disinfection. J. Amer. Chem. Soc. 28:964-993.

985

Basu, M. 1942. Preservation of books with formaldehyde. Sci. Culture 7:617.

986

Beamer, P.D.; Sutherland, A.K.; Schmittle, S.C. 1949. Studies on Newcastle disease: II. The resistance of Newcastle disease virus to formaldehyde fumigation. Amer. J. Vet. Res. 10:384-387.

987

Brock, N.W. 1963. Action of formaldehyde on microorganisms. *J. Bacteriol.* 85:1028-1031.

988

Public Health Service Committee on Formaldehyde Disinfection. 1958. Disinfection of fabrics with gaseous formaldehyde. *J. Hyg.* 56:488-515.

989

Darlow, H.M. 1958. The practical aspects of formaldehyde fumigation. *Monthly Bull. Min. Health, Public Health Lab. Serv.* 17:270-273.

990

Fust, B. 1941. Untersuchungen ueber die wirksamkeit verschiedener verfahr-ender raum disinfection mittels formaldehyd-wasser und paragerm-dampfen. *Schweiz. Med. Wochensch.* 71:1425-1429.

991

Gaal, A. von. 1951. Toxicity of formaldehyde. *Zentralbl. Allgem. Pathol. Pathol. Anat.* 51:257-262.

992

Glick, C.A.; Gremillion, G.G.; Bodmer, G.A. 1961. Practical methods and problems of steam and chemical sterilization. *Proc. Animal Care Panel* 11: 37-44.

993

Graham, R.; Michael, V. 1934. Germicidal properties of formaldehyde. *Poultry Sci.* 13:40-43.

994

Hermann, W.; Hohn, J. 1933. Action of formaldehyde on the tubercle bacillus. *Z. Tuberk.* 68:145-156.

995

Holm, M.L.; Gardner, E.A. 1910. Formaldehyde disinfection. *J. Infect. Dis.* 7:641-663.

996

Hundemann, A.S.; Holbrook, A.A. 1959. A practical method for the decontamination of microbiological laboratories by the use of formaldehyde gas. *J. Amer. Vet. Med. Ass.* 135:549-553.

997

Kingston, D.; Lidwell, G.M.; Woble, W.C. 1962. Self-disinfecting surface coatings which evolve formaldehyde. *Monthly Bull. Min. Health, Public Health Lab. Serv.* 21:246-251.

998

Taylor, E.M.; Maloney, P.J. 1949. Sterilization of plastic syringes by formalin vapor. *Can. Med. Ass. J.* 61:621-622.

999

Ubertini, B.; Nardelli, L.; Santero, G.; Cassi, D. 1957. Studies on the inactivation of foot-and-mouth disease with beta-propiolactone (BPL) and formaldehyde. *Schweiz. Arch. Tierheilk.* 99: 309-328.

1000

Walker, J.F. 1953. Formaldehyde. 2nd ed. Reinhold Publishing Corporation, New York. 575 p.

1001

Wolff, U. 1942. Sterilization: method for small organizations and army use in wartime. *Muench. Med. Wochensch.* 84: 1100-1102. (Also *Ind. Med.* 22:504.)

E. MISCELLANEOUS DECONTAMINATION AND STERILIZATION

1002

Alder, V.G.; Gillespie, W.A. 1961. Disinfection of woolen blankets in steam at subatmospheric pressure. *J. Clin. Pathol.* 14:515-518.

1003

Andrewes, C.H.; Horstmann, D.M. 1949. The susceptibility of viruses to ether. *J. Gen. Microbiol.* 3:290-297.

1004

Bourdillon, R.B., et al. 1948. II. Air disinfection by chemicals, p. 54-172. In R.B. Bourdillon, et al. (ed.) *Studies in air hygiene*. Medical Research Council Report Series No. 262, His Majesty's Stationery Office, London.

908

Hill, R. (1961.) Studies
Medical Research Council
Series No. 262, His Majesty's
Stationery Office, London.

1006

Darmady, E.M.; Hughes, K.E.A.; Jones,
J.P. 1962. Thermal death-time of
spores in dry heat in relation to
sterilization of instruments and
syringes. *Lancet* 2:766-769.

1007

Freytag, P.A. 1962. Ein beitrag zur
sterilisation in klinik und praxis.
Munch. Med. Wochenschr. 44:1-19.

1008

Friedman, H. 1962. A guide for chem-
ical disinfection in hospitals.
J. Einstein Med. Cent. 11:22-26.

1009

Glick, C.A.; Gremillion, G.G.; Badner,
G.A. 1961. Practical methods and
problems of steam and chemical steril-
ization. *Proc. Animal Care Panel*
11:77-84.

1010

Gremillion, G.G.; Miller, L.F.; Badner,
G.A. 1962. An electric incinerator
for sterilization of small volumes of
air. *Appl. Microbiol.* 6:274-276.

1011

Grubb, T.C.; Miesse, M.L.; Puetzer, B.
1967. The inactivation of influenza
virus by certain vapors. *J. Bacteriol.*
93:61-66.

1012

Hilleman, M.R.; Taylor, R.G. 1968.
A safe high-speed blender for process-
ing infectious materials. *J. Lab.*
Clin. Med. 51:977-980.

1013

Himmelfarb, P.; El-Bissi, H.M.; Read,
R.B., Jr.; Litzky, W. 1962. Effect of
relative humidity on the bactericidal
activity of propylene-oxide vapor.
Appl. Microbiol. 10:421-425.

1014

Holland, P. 1962. Experimental
trial of the sterilization of
a hexylresorcinol preservative. *Irish J.*
Med. Sci. 421:71-77.

1015

Howie, J.W.; Allison, V.D.; Bowie, J.B.;
Darmady, E.M.; Knox, R.; Penikett,
E.J.K.; Sane, J.A.V.; Sykes, G.; Wells,
C.D.; Wells, C.A.; Wyllie, G.A.F.;
Kelsey, J.C. 1962. Sterilization by
steam under increased pressure. *Lancet*
1:425-426.

1016

Iwahara, S.; Kurisu, H.; Yamate, N.;
Kano, K. 1960. On the germicidal
activity of ozone-sterilizer. *Bull.*
Nat. Inst. Hyg. Sci. (Japan) 70:151-152.

1017

Knox, R.; Penikett, E.J.K. 1962.
Influence of initial vacuum on steam
sterilization of dressings. *Brit. Med. J.*
1:602-603.

1018

Kruse, R.H.; Green, T.D.; Chambers, R.C.;
Jones, M.W. 1967. Disinfection of
aerosolized pathogenic fungi on labora-
tory surfaces: I. Tissue phase. *Appl.*
Microbiol. 11:436-445.

1019

Kruse, R.H.; Green, T.D.; Chambers, R.C.;
Jones, M.W. 1964. Disinfection of
aerosolized pathogenic fungi on labora-
tory surfaces: II. Culture phase.
Appl. Microbiol. 12:155-160.

1020

Lovelock, J.E.; Litwell, C.M.; Rayburn,
W.F. 1944. Vaporization of lactic acid
as an aerial bactericide. *Nature* 154:
747.

1021

Mackay, I. 1962. Hexylresorcinol as
an aerial disinfectant. *J. Hyg.* 60:
82-96.

1022

Mayo, E.C.; Moser, J.O.; Kaye, S. 1952. The evaluation of disinfectant vapors: I. Factors influencing the sporicidal action of gaseous ethylenimine. *Bacteriol. Proc.* 52:64.

1023

Miller, S.; Burkhardt, B.; Ehrlich, R.; Peterson, R.J. Nov. 1956. Disinfection and sterilization of sewage by ozone. International Ozone Conference, Chicago.

1024

Pan, C.H.; Gast, J.H.; Estes, P.L. 1961. A comparative procedure for evaluating antimicrobial activity of gaseous agents. *Appl. Microbiol.* 9:45-51.

1025

Penikett, E.J.K.; Rowe, T.W.; Robson, E. 1959. Vacuum drying of steam sterilized dressings. *J. Appl. Bacteriol.* 71:282-290.

1026

Perkins, F.T.; Short, D.J. 1957. A new technique in the sterilisation of animal houses, racking and cages. *J. Animal Technician's Ass.* 8:10-17.

1027

Polyakov, A.A.; Trzhelsets'ka, T.A.; Arbuzov, K.N.; Akhumova, A.A.; Chepurov, K.P. 1962. Bactericidal action of nitrogen dioxide on the vegetative and spore forms of Bacillus anthracis. *Mikrobiol. Zh. Akad. Nauk Ukr. RSR* 24:43-45.

1028

Puck, T.T. 1947. The mechanism of aerial disinfection by glycols and other chemical agents: I and II. *J. Exp. Med.* 85:729-757.

1029

Punte, C.L.; Owens, E.J.; Krackow, E.H.; Cooper, P.L. 1958. Influence of physical activity on the toxicity of aerosols and vapors. *A.M.A. Arch. Ind. Health* 17:34-37.

1030

Robertson, O.H. 1946. Disinfection of air by germicidal vapors and mists. *Amer. J. Public Health* 36:390-391.

1031

Rosebury, T.; Meiklejohn, G.; Kingsland, L.C.; Boldt, M.H. 1947. Disinfection of clouds of meningopneumonitis and psittacosis viruses with triethylene glycol vapor. *J. Exp. Med.* 85:65-76.

1032

Stone, J.D.; Burnet, F.M. 1945. The action of halogens on influenza virus with special reference to the action of iodine vapor on virus mists. *J. Exp. Biol. Med. Sci.* 23:205-212.

1033

Sulkin, S.E.; Wallis, H.C. 1952. Effect of ether on certain coxsackie viruses. *Proc. Soc. Exp. Biol. Med.* 81:151-154.

1034

Torricelli, A. Nov. 1956. Sterilization of containers in the food industry. International Ozone Conference, Chicago.

1035

Twort, C.C.; Baker, A.H.; Finn, S.R.; Powell, E.O. 1940. The disinfection of closed atmospheres with germicidal aerosols. *J. Hyg.* 40:253.

VIII. RELATED BIBLIOGRAPHIES

1036

Brewer, N.R. 1957. References on design of animal quarters. Bull. Med. Res. 11:6-8, (41 ref.). Reprint, Inst. Lab. Animal Resources, Nat. Acad. Sci., Washington, D.C.

1037

Cass, J.S.; Campbell, I.R.; Lange, L. 1960. A guide to production, care, and use of laboratory animals (an annotated bibliography). Fed. Proc., Suppl. 6, Waverly Press, Inc., Baltimore, Md. 1930 ref., 196 p.

1038

Cass, J.S.; Campbell, I.R.; Lange, L. 1963. A guide to production, care, and use of laboratory animals (an annotated bibliography). Fed. Proc., Transl. Suppl. 22 (2 pt. 3), Suppl. 13, March-April 1963.

1039

Fox, G. 1962. Design of laboratory facilities, a classified list of selected references, 1947-1962. Dir. Res. Serv., Nat. Inst. Health, U.S. Public Health Service, Bethesda, Md. 149 ref., 15 p.

1040

Fox, G. 1963. Design of clean rooms, a classified list of selected references, 1955-1963. Dir. Res. Serv., Nat. Inst. Health, U.S. Public Health Service, Bethesda, Md. 127 ref., 15 p.

1041

Kyd, S.P.; Page, J.K. 1957. Selected reading list on laboratory design: Annotated references, 1944-1956. J. Inst. Chem. (London) 81:276-280.

1042

Rohles, F.H. 1962. The chimpanzee: a topical bibliography. Tech. Doc. Rep. ARL-TDR-62-9, Holloman Air Force Base, New Mexico. 312 p.

1043

Throp, C.E. Bibliography of ozone technology. Vol. 1, Analytical procedures and patent index. Vol. 2, Physical and pharmacological properties. John F. Swift Co., Inc., Chicago.

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DATE LISTED

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Bloomfield, J.J.	797	Burke, W. C., Jr.	727
Blowers, R.	146*, 660*, 661*	Burkhardt, B.	1023
Bodian, D.	456*, 495, 496	Burmester, B.R.	460*
Bodmer, G.A.	686, 908, 939, 992, 1009, 1010	Burnet, F.M.	354*, 355*, 1032
Boerke, E.F.	732		
Bogart, W.M.	774		
Bogen, E.	147*, 148*, 184, 351*		
Bohl, E.H.	457*	Cadle, R.D.	822
Bohlen, K.G.	626	Callis, J.J.	930*
Bokesch, E.R.	760	Campbell, I.R.	1037, 1038
Boldt, M.H.	1031	Capps, W.I.	323
Bolduan, O.E.A.	826	Carithers, H.A.	272*
Bolotovskii, V.M.	747	Carter, A.	93
Bond, H.K.	618*	Carter, G.B.	275
Bond, R.G.	700	Carter, R.W.	510
Bookwalter, H.L.	87, 92	Cartes, A.	85
Borgen, L.O.	352*	Casals, J.	461*
Borger, K.	857*	Cass, J.S.	1037*, 1038*
Bound, W.h.	660	Cassi, D.	999
Bourdillon, R.B.	662*, 663*, 707*, 728*, 782*, 843*, 1004*, 1005*	Castle, R.D.	970
		Castleberry, M.W.	462*
		Castleman, R.A., Jr.	151*
		Celanese Corporation of America	899*
Bowers, G.M.	215	Cember, H.	784*
Bowie, J.H.	1015	Chamberlain, D.M.	538
Bowler, C.	963	Chamberlain, R.W.	463*, 503
Braams, W.G.	545	Chambers, R.C.	1018, 1019
Brandly, C.A.	284, 367, 458*, 539	Chapin, C.W.	511
	523, 524	Chappel, W.	273*
Brant, H.G.	664*	Charlton, R.	567
Brewer, J.H.	150	Chatigny, M.A.	9*, 152*, 420*, 557*, 620*, 732, 757
Brewer, L.M.	287, 556*, 576, 1036*		286
Broadwater, G.C.	522	Cheever, F.S.	1027
Brock, N.W.	987*	Chepurov, K.P.	747
Brown, A.E.	619*	Chervonskii, V.I.	153*
Brown, C.E.	729*, 783*	Chope, H.D.	453
Brown, H.E.	404	Chow, T.L.	512
Brown, J.H.	149*	Chute, H.L.	669, 670
Brown, J.W.	367	Citek, F.J.	924
Brown, T. McP.	353*	Clark, A.B.	421*
Bruch, C.W.	898*	Clark, E.M.W.	900*
Brumfield, H.F.	543	Clauberg, K.W.	232, 326
Bryan, F.A.	727	Clayton, H.R.	85*, 93, 94, 114
Bubash, G.R.	794	Cluff, L.E.	361, 410
Buchanan, L.M.	667, 668, 788, 829, 845	Coatney, G.R.	558*
	762	Cobb, K.W.	274*
Duckland, F.E.		Cobbett, L.	559*
Buffalo Electro-Chemical Co.	974*, 975*	Cofrancesco, J.A.	356*
Buker, E.O.	455	Coghlan, J.D.	285, 322, 439, 490
Bunnell, D.E.	459*	Cohen, B.J.	858*
Burden, F.K.	929	Cohn, M.L.	560*
Burgoyne, J.H.	929*	Coleman, H.S.	830*
Burke, H.E.	150*	Collison, W.E.	

Colwell, C.A.	957
Combiesco, D.	464*
Comings, E.W.	859*
Commission on Acute Respiratory Disease	116*, 357*
Committee on Hospital Facilities, Engineering and Sanitation Section	561*
Community Accident Insur- ance Society	28*
Conrad, D.	931*
Constantine, D.G.	358*, 465*
Contacos, F.G.	410
Converse, J.L.	462
Cook, E.B.M.	11*
Cook, K.M.	149
Cooper, P.L.	1029
Coppoletta, J.	203
Cotton, R.T.	932*
Couland, E.	466*, 467*
Couling, C.W.	422*, 621*
Coulthard, C.E.	423*
Cown, W.B.	785*
Cox, G.E.	278
Craig, D.E.	468*
Craighead, E.	548
Cralley, I.J.	854
Crew, B.	661
Crider, W.L.	739
Crisp, L.R.	790
Crossman, R.F.	665*
Crumb, C.	754
Culbertson, W.R.	713
Cumming, C.N.W.	562*
Cummings, D.E.	469*
Cupak, M.	247
Curran, H.R.	901*

D

Dahlgren, C.M.	786*, 829
DallaValle, J.M.	154*, 801
Dalldorf, G.	563*
D'Allessandro, G.	902*, 903*
Damon, S.R.	12*
Dapper, E.R.	760
Darker, G.D.	949
Derlow, H.M.	13*, 155*, 275*, 666*, 860*, 989*
Darmady, E.M.	1006*, 1015
Davenport, P.	434, 872
Davidson, W.L.	359*
Davies, R.L.	564*
Davis, F.E.	276*
Davis, F.	301
Davis, J.M.	831*

Dawson, F.W.	904*, 905*
Day, H.S.	565*
Decker, H.M.	424*, 622*, 667*, 668*, 669*, 670*, 671*, 672*, 673*, 674*, 675*, 676*, 677*, 709, 786, 787*, 788*, 789*, 799, 803, 829, 846, 847

Deeble, P.W.	566*
Deindoerfer, F.H.	690
Dekking, F.	156*
DeKoch, G.	360*
Delaplane, J.P.	276
DeLay, P.D.	277*
Del Favero, J.E.	462
Delmorne, M.J.	416
DeOme, K.B.	277
Deralois, D.G.	911
Derrick, E.H.	404
Devereux, R.C. deB.	567*
Dickinson, R.W.	727
Dimmick, R.L.	832*
Dimmock, N.A.	833*
Dimopoulos, G.T.	477
Doherty, J.	703
Dolowy, W.C.	278*, 425*, 568*, 623*

Dong, L.	474, 475, 476
Donohoe, H.E.	889
Draese, K.D.	86*
Druett, H.A.	470*, 471*, 472*, 730*, 814

Dube, E.W.	839
Dube, F.J.C.	839
Du Buy, H.	157*
Du Buy, H.G.	790*, 791*
Duguid, J.P.	158*, 159*, 160*, 161*

Dunn, W.	148
Dunne, H.W.	279*
Dyle, J.J.	685

E

East, D.N.	678
Eddie, B.	99, 312, 388, 389, 390, 514
Edebo, L.	763*
Ederer, G.M.	14*
Edward, A.G.	907
Edwards, J.W.	861*
Egerer, R.	454
Erlich, R.	1023
Eisman, L.P.	933*

Elberg, S.S.	473*
El-Bissi, H.M.	1013
Ellingson, H.V.	87*, 92
Elmore, F.H.	230, 534
Elsea, R.	665
Elsworth, R.	678*
Engbaek, C.	16*, 163*
Engelfried, J.J.	844*
Engley, F.B., Jr.	934*
Epstein, S.S.	164*
Erickson, H.	764*
Erskine, E.B.	928
Espana, C.	165*
Estes, F.L.	1024
Evans, A.S.	166*
Evans, C.B.	410
Evans, F.R.	901
Ewing, C. L.	792*
Eyles, D.E.	361*

F

Faber, H.K.	474*, 475*, 476*
Fagle, D.L.	862*
Fahlman, B.	839, 840
Fahy, A.	280*
Faine, S.	281*
Farrar, F.W.	844
Fearnehough, G.S.	17*
Feazel, C.E.	906*
Fekety, F.R.	94
Fellowes, O.N.	477*, 907*, 930
Ferguson, L.C.	457
Ferris, D.H.	18*, 187
Fincher, E.L.	785
Finger, J.A.	130
Finman, J.E.	632
Finn, S.R.	1035
Fischer, E.	938
Fischer, J.B.	399
Fish, C.H.	167*
Fisher, L.E.	282*
Fitzpatrick, J.P.	626*
Flynn, R.J.	569*
Fontes, A.K.	197
Fox, G.	1039*, 1040*
Francis, E.	89*
Francis, T., Jr.	362*, 363*
Frank, M.A., Sr.	220, 882, 883
Frank, M.H.	278
Fredette, V.	679*
Freeman, M.	355
Freeman, M.A.R.	935*
Fremming, B.F.	270, 283*
French, A.J.	264
Freytag, B.E.	1007*

Friedl, J.L.	936*
Friedman, H.	1008*
Friedman, M.H.F.	19*
Fromm, G.	478*
Fulton, J.D.	937*
Fulton, J.K.	303
Fulton, R.A.	793*, 941
Furcolow, M.L.	90*, 513
Fust, B.	990*

G

Gaal, A. von.	921*
Gaden, E.L., Jr.	64
Gale, C.	483
Gallia, F.	97
Galuzo, I.G.	364*
Ganis, F.M.	426*
Gardner, E.A.	995
Gardner, G.C.	433
Gardner, G.D., Jr.	721
Gardner, J.A., Jr.	570*
Garris, L.M.	863*
Gast, J.H.	1024
Gaulin, R.P.	690*, 691*, 700
Gavrilov, V.I.	107
Gaydamovich, S. Ya.	107
Geile, F.A.	424, 622, 671, 672, 673
Gellis, S.S.	168*
Gentry, R.F.	794*
Getz, M.E.	361
Gewalt, R.	338*
Gibb, T.R.P., Jr.	627*
Gibson, J.	20*, 169*, 628*
Gilbert, H.	682*
Gilcreas, F.W.	210
Giles, F.J., Jr.	629*
Gillespie, W.A.	1002
Girolami, M.	365*
Glendennag, D.M.	918
Glick, C.A.	671, 673, 908*, 939*, 992*, 1009*
Gochenour, W.S., Jr.	804
Goddard, K.R.	667, 668, 683*, 684*
Goettler, V.	479*
Goetz, A.	795*
Gogolak, F.M.	731*
Gold, S.S.	626
Goldberg, L.J.	732*, 796*
Goldwasser, R.	664*
Golinevich, H.A.	82
Goodpasture, E.W.	480*
Gordon, D.A.	207
Gordon, J.E.	170*, 481*

Gordon, M.T.	802, 817	Hammon, W. McD.	165
Gossett, J.	685*	Hamre, D.	454
Goven, J.W.	482*	Hanel, E., Jr.	176*, 212, 316, 611, 654, 719, 726, 879
Graham, R.	993*		
Gray, D.F.	131, 171*	Hansen, H. N.	942*
Green, H.L.	172*	Hanson, R.P.	284*, 367*, 458, 489*, 539
Green, T.D.	1018, 1019	Harding, H.P.	285*, 490*
Greenburg, L.	797*, 798*	Harper, C.J.	81
Greenspan, F.P.	976*	Harper, G.J.	177*, 491*
Gregg, A.	403	Harrell, G.T.	573*
Greiff, D.	889	Harris, G.J.	25*, 687*, 896
Greiner, D.J.	251		
Gremillion, G.G.	427*, 630*, 686*, 687, 908, 939, 992, 1009, 1010*	Harris, M.M.	829
		Harris-Smith, R.	632*
Griffin, C.A.	483*	Harstad, J.B.	221, 222, 424, 622, 669, 670, 672, 674, 675, 676, 709*, 786 710*, 711*
Griffin, C.W.	733*		
Griffith, W.R.	729, 783	Hart, D.	32
Grist, N.R.	571*	Hartley, J.W.	913
Gross, H.T.	117*	Hartman, F.W.	149, 784
Gross, N.H.	137, 219, 221, 222, 225, 424, 622, 670, 672	Hatch, T.	381
		Harvey, A.E.C.	943*
Grossman, M.	181	Hawk, E.A.	492*, 493*
Grotzinger, P.J.	713	Hawthorne, V.M.	904
Grubb, T.C.	1011*	Hearn, H.J.	544
Gruber, G.B.	21*	Heddleston, K.L.	762, 764, 765*, 766*, 767*, 768*, 769*, 770*, 771*, 773
Grundy, W.E.	940*	Heden, C. G.	774
Gucker, F.T., Jr.	22*		
Gudakunst, D.W.	125	Heger, E.N.	944*
Guerin, C.	484*	Heicken, K.	91*, 368*, 369*, 688*
Guld, J.	173*	Held, J.R.	574*
Guntheroth, W.G.	90	Hemeon, W.C.L.	470, 471, 472, 473, 734*
Gushchina, N.B.	708*	Hemmings, W.A.	232, 326
Guss, L.	572*	Henderson, D.W.	370*
Gustafson, D.P.	366*, 485*, 497		800*
Guyton, H.G.	845*, 846*, 847*, 848*	Henderson, R.J.	994*
		Heppleston, A.G.	945*
Gwatkin, R.	486*	Herman, L.G.	307
		Hermann, W.	946*
		Heseltine, H.K.	278
		Hess, A.R.	575*
		Hess, L.G.	866*, 101*
		Hesse, A.L.	372*
		Hickey, J.L.	1013*
		Hilleman, M.R.	513
		Hillis, W.D.	178*
		Himmelfarb, P.	450
		Hinton, A.	849*
		Hinton, W.A.	308
		Hinz, R.W.	
		Hirshfeld, J.W.	
		Hodges, D.R.	

H

Habel, K.	487*
Haelterman, E.O.	428*
Haenni, E.O.	941*
Hagiwara, S.	909*
Hahn, N.	865*
Haines, B.W.	308
Hall, L.B.	667, 668, 700, 799*, 829
Hall, R.N.	395
Halsey, M.N.	23*
Halvorson, H.O.	543
Hambleton, A.	24*, 174*, 631*
Hamburger, M.	175*
Handy, A.H.	488*

Hoeltge, E.J.	429*		
Hoffert, W.F.	286*		
Hoffman, J.C.	712*		
Hoffman, R.K.	677, 787, 904, 905, 910*, 920, 966		
Hofstad, M.S.	436, 955		
Hohn, J.	994		
Hokanson, J.F.	279		
Holbrook, A.A.	996		
Holbrook, J.A.	287*, 576*		
Holden, P.	288*, 494*		
Holladay, L.L.	810		
Hollaender, A.	154, 210, 791, 801*		
Holland, P.	1014*		
Holm, M.L.	995*		
Holme, T.	763		
Hopper, S.H.	911*		
Hornibrook, J.W.	119*		
Horsfall, F.L.	414, 430*		
Horstmann, D.M.	1003		
House, H.L.	926		
Howard, D.H.	123		
Howard, J.M.	713*		
Howe, C.	87, 92*		
Howe, H.A.	495*, 496*		
Howie, J.W.	1015*		
Howitt, B.F.	373*		
Hoyland, F.	289*		
Hoyt, D.D.	184		
HPAC Engineering Data File	689*		
Hresko, J.	203		
Hubbard, A.J. H.	446		
Huddleson, F.	120*		
Huddleson, I.	912*		
Huebner, R.J.	118*, 130, 371*		
Hueper, W.C.	179*		
Hughes, K.E.A.	232, 326, 1006		
Hughes, R.W.	497*		
Hull, R.N.	26*, 290*, 291*, 292*, 293*, 978		
Hull, T.G.	374*		
Hummeler, K.	359		
Humphrey, A.E.	690*		
Hundemann, A.S.	996*		
Huppert, M.	27*, 180*		
Hurd, J.W.	701		
Hurst, V.	181*		
Hutchings, I.J.	977*		
Hutchings, L.M.	455		
Hyatt, E.C.	850*		
		I	
		Idani, J.A.	498*
		Idoine, L.S.	811
		Ignatovich, V.F.	182*
		Ihrig, H.K.	800
		Imboden, J.B.	65, 93*
		Ingalls, T.H.	170, 481
		Ingram, F.R.	181
		Ingram, W.T.	183*
		Inserillo, G.	202, 203
		Institute of Laboratory Animal Resources	296*
		Institute of Laboratory Animal Resources, Com- mittee on the Animal Facilities Survey	578*
		Iovine, V.M.	713
		Irminger, H.F.	950
		Irons, J.V.	375*
		Iwahara, S.	1016*
		J	
		Jacobson, G.	184*
		Jameson, E.L.	957
		Jamison, R.W.	301
		Janssen, P.	344
		Janssen, R.J.	905
		Jarrett, W.F.H.	402, 403
		Jawetz, E.	499*
		Jellison, W.L.	455
		Jemski, J.V.	29*, 30*, 49, 185*, 297*, 298*, 299*, 300*, 315, 431*, 500*, 502, 523, 524, 525. 633*, 634*, 640. 735*
		Jenney, E.W.	126
		Jennings, B.H.	577
		Jennison, M.W.	186*
		Jenson, K.A.	31*, 635*
		Johansson, K.R.	187*
		Johnson, B.H.	301*
		Johnson, J.E.	94*
		Johnson, J.A.	976
		Jones, J.P.	1006
		Jones, M.W.	1018, 1019
		Jones, W.I.	308
		Jungherr, E.	202, 203, 508

K

Kadull, P.J. 87, 94, 100, 115
 Kaipainen, W.J. 281
 Kaminsky, J.H. 867*
 Kano, K. 1016
 Kantorowicz, O. 868*
 Kantzes, H.L. 733
 Kathe, J. 376*
 Kautter, D.A. 744
 Kaye, S. 947*, 948*, 949*,
 950*, 951*, 952*,
 961, 967, 969, 1022
 Keeble, S.A. 302*
 Keehn, R.J. 713
 Keeney, E.L. 636*
 Keller, L.R. 714*
 Keller, R. 188*
 Kelly, A.R. 913*
 Kelly, E.H. 92
 Kelly, G.A. 823
 Kelsey, J.C. 1015
 Kendrick, J.W. 310
 Kennard, M.A. 303*, 304*
 Kennedy, A.H. 399
 Kethley, T.W. 785, 802*
 Kinard, R. 305*
 Kinard, R.F. 135, 265
 King, J.K. 967
 King, N.B. 488
 King, W.W. 501*
 Kingsland, L.C. 1031
 Kingston, D. 997*
 Kirchheimer, W.F. 298, 306*, 307*,
 500, 502*
 95*, 96*
 Kisskalt, K. 373, 463, 503*
 Kissling, R.E. 953*
 Klarenbeek, A. 308*
 Klein, F. 978*
 Kline, L.B. 599
 Kniazuk, M. 1015, 1017*
 Knox, R. 217
 Koenig, M. 869*
 Kohn, A. 125
 Koppa, T.M. 817
 Kordecki, M.C. 870*
 Kotrba, W. 1029
 Krackow, E.H. 432*, 433*, 451*
 Kraft, L.M. 691*
 Kranz, P. 736
 Krueger, A.P. 189*, 1018*, 1019*
 Kruse, R.H. 97*
 Kubes, V. 788, 803*, 804*
 Kuehne, R.W. 190*
 Kuh, C. 444
 Kulka, J.P.

Kundsinn, R.B. 191*
 Kurisu, H. 1016
 Kuvinn, S.F. 410
 Kyd, S.P. 1041*

L

Lackey, M.D. 791
 Ladimir, I. 8, 32*
 Laidlow, P.P. 377*
 Lamanna, C. 871*
 Lamson, A.L. 506
 Lanahan, T.B. 617
 Landolt, R.E. 434*, 872*
 Lane, W.R. 172
 Lane-Petter, W. 616
 Lang, E.W. 906
 Lange, L. 1037, 1038
 Langmuir, A.D. 210
 Lapple, C.E. 692*
 Larkin, M.C. 579*
 Larose, R.N. 538
 Laube, P.J. 849
 Lauder, I. 492, 493
 Laurell, G. 715*
 Lawson, D.D. 493
 Lebherz, R.W., Jr. 760
 Lebowich, R.J. 983
 Lee, K.M. 504*
 Leif, W.R. 736*, 873*
 Lemon, H.M. 805*, 816
 Lenert, L.G. 700
 Lense, F.T. 674, 845, 848
 Lento, H.G. 941
 LeRoux, J. 360
 Lester, W., Jr. 806*
 Lev, M. 435*
 Levine, P.P. 436*
 Lewis, H.F. 580*
 Lewis, J.L., Jr. 409
 Lidwell, O.M. 656, 807*, 808*,
 997, 1020
 Lincoln, R.E. 308, 874*
 Lind, A. 33*, 192*,
 638*, 639*
 Lindeman, R.J. 393
 Lindstrom, E.S. 279
 Lippmann, S.M. 809*
 Litsky, W. 1013
 Live, I. 505*
 Livingston, J.R. 581*
 Loffler, W. 121*, 193*
 LoGrippe, G.A. 914*
 Long, E.R. 34*, 65, 113, 194*

Loonev, J.M.	195*	McDaniel, I.N.	512
Lord, J.	840	McDaniel, L.S.	512*
Love, F.M.	98*, 378*	McGilvray, C.D.	385*
Lovelock, J.E.	1020*	McKercher, D.G.	318*
Lowe, A.E.	181	McLean, R.L.	742
Luckiesh, M.	810*	McLeod, J.A.	692
Ludford, P.M.	733	McMaster, W.W.	559, 598
Luginbuhl, R.E.	506*	McNaught, W.	493
Lurie, M.B.	329, 437*, 507*, 508*, 547, 716*, 851*	McNett, E.H.	852*
	8	McPherson, C.W.	307
Lynch, J.M.		Meade, G.M.	38*, 199*, 200*
		Medearis, D.M.	507
		Mees, A.	207
		Mehl, J.	39*, 201*
		Meigs, D.P.	95c*
		Meiklejohn, G.	1031
		Mellin, M.	649
		Melnick, J.L.	311*
		Menges, R.W.	513*
		Merck, Sharpe and Dohme	915*
		Merger, C.	202*
		Merger, C.E.	631
		Metcalfe, S.N., Jr.	760
		Metelkin, A.I.	386*
		Methews, J.	955*
		Metzner, W.P.	648
		Meyer, K.F.	99*, 312*, 387*, 388*, 389*, 390*, 514*
		Meyers, C.E.	203*
		Michael, V.	993
		Michaelsen, G.S.	695*, 700
		Mickelson, O.	943
		Middlebrook, G.	737*, 858
		Miesse, M.L.	1011
		Miller, E.S.	92
		Miller, L.F.	686, 879, 1010
		Miller, O.T.	611, 654, 717*
		Miller, S.	1023*
		Miller, W.S.	219, 225, 883
		Mills, C.C.	742
		Mingle, C.K.	510
		Minner, J.R.	291, 293
		Mitchell, C.A.	391*
		Mitchell, R.B.	937
		Mitchell, R.I.	738, 739
		Mitrovic, M.	794
		Mochmann, H.	376
		Moeller, R.W.	515*
		Moore, G.J.	455
		Moore, W.K.S.	964
		Moorman, H.E.	673
		Mooser, H.	121, 193
		Morelli, F.A.	800
		Morelli, R.	853*
		Moro, M.	504
		Morris, E.J.	40*, 204*, 678
MacDonald, R.L.	970		
Mack, W.N.	196*		
Mackay, I.	1021*		
MacPherson, L.W.	379*, 380*		
Madin, S.H.	309*, 310		
Magill, T.P.	363		
Mahlandt, B.G.	308		
Mair, N.S.	232, 326		
Maire, L.F.	298, 500		
Maister, H.G.	774		
Malligo, J.E.	811*		
Mallman, W.L.	197*		
Malmborg, A.S.	768		
Malmgren, B.	764, 769, 770, 771, 772*, 773*		
Maloney, P.J.	998		
Mankiewicz, F.	150		
Mannini, A.	509*		
Manson-Bahr, P.E.C.	381*		
Manthei, C.A.	510*		
Manufacturing Chemists Ass.	954*		
Margard, W.L.	739		
Marks, J.	232, 326		
Marsh, P.V.	834*		
Marsh, R.C.	693*		
Marti, W.J.	301		
Martin, W.B.	492, 493		
Marvin, R.M.	35*		
Mascoli, C.C.	291		
Mathews, J.	537		
Mattinson, M.W.	171		
Maxon, W.D.	694*		
May, C.W.	643		
May, K.R.	730, 812*, 813*, 814*, 815*, 835*		
Mayo, E.C.	1022*		
McCarter, J.A.	875*		
McClung, L.S.	36*, 37*, 862		
McCollum, R.W.	198*, 382*		
McCoy, G.W.	122*, 383*, 511*		
McCullough, N.B.	384*		

Morris, S.I. 41*, 205*, 392*
 Morsy, T.A. 532
 Morton, H.E. 206*
 Morton, J.D. 491
 Moser, J.O. 1022
 Moses, H.E. 366, 485
 Moss, M.L. 137, 221, 222
 Moteiunas, L.I. 516*
 Mott, L.D. 126
 Moulton, J.E. 310
 Moulton, S. 816*
 Mourmoseff, G. 718
 Mudd, S. 42*
 Mullican, C.L. 438, 721
 Munger, M. 120*
 Munkelt, F.H. 582*, 696*
 Murphy, J.T. 897
 Murray, J.T. 123*

N

Nadaichik, L.V. 526
 Nagy, R. 712, 718*
 Nanck, E.G. 124*
 Nardelli, L. 999
 Nash, J.C. 26, 290, 292
 National Institutes of
 Health, Division of
 Research Services 583*
 Nelson, C.B. 393*
 Nelson, D.B. 463, 503
 Nelson, E.C. 517*
 Nelson, J.B. 518*, 519*
 Nelson, K.R. 119
 Nelson, N. 916
 Newhall, L.E.J. 43*
 Newitt, A.W. 125*
 Newman, L.B. 957*
 Ney, F.G. 149
 Nichols, A.C. 505
 Noble, W.C. 997
 Norseth, H.G. 738*
 Norval, J. 356
 Novak, F.E. 212, 316, 524,
 641, 720, 879
 Nugester, W.J. 136
 Nuemmaker, J.C. 353
 Nye, E.R. 520*
 Nye, R.E. 283
 Nyka, W. 742

O

Oddo, F.G. 902, 903
 Oehme, M. 454
 O'Grady, F. 54
 O'Hern, E.M. 876*
 Oliphant, J.W. 207*, 394*
 Olitsky, P.K. 440, 461
 Oliver, A.J. 263
 Olson, B.J. 157
 Olson, F.C.W. 877*
 Orlicki, J. 878*
 Orr, C., Jr. 802, 817*
 Orris, L. 916
 Ortensio, L.F. 936
 Overholt, E.L. 100*
 Oviatt, V.R. 700
 Owen, C.R. 455
 Owens, E.J. 1029

P

Packman, L. 470, 472
 Paddy, S.M. 818*
 Page, J.K. 1041
 Paine, T.F. 208*
 Painter, R.B. 827
 Palmer, J.H. 682
 Palmes, E.D. 916*
 Pan, C.H. 1024*
 Paneth, L. 44*, 101*, 209*
 Pappagianis, D. 543
 Park, W.E. 393
 Parker, D.M. 262, 346
 Parker, R.R. 207, 337, 394
 Patterson, W.C. 126*
 Paul, J.R. 304
 Payne, D.J.H. 232, 326
 Peacock, S. 470, 471, 472
 Peck, F.B., Jr. 26, 292
 Peeler, R.M. 114
 Pelczar, M.J. 733
 Penfold, T.W. 556
 Penikett, E.J.K. 1015, 1017, 1025*
 Penny, G.W. 819*
 Pereira, W.P. 313*
 Perkins, F.T. 314*, 1026*
 Perkins, J.E. 210*
 Perkins, J.J. 958*
 Perkowski, J. 584*
 Perla, D. 521*
 Perry, J.E. 94
 Peters, D.C. 434, 872
 Peterson, R.J. 1023
 Pfeifer, V.F. 774*

Phillips, C.R. 950, 951, 959*,
 960*, 961*, 966
 Phillips, C.B. 25, 29, 30, 45*,
 46*, 47*, 48*, 49*,
 185, 211*, 212*,
 213*, 223, 224,
 298, 299, 300,
 315*, 316*, 438*,
 500, 502, 522*,
 523*, 524*, 525*,
 611, 612, 633,
 634, 640*, 641*, 654,
 655, 717, 719*,
 720*, 721*, 726,
 735, 879*
 Phinney, F.S. 793
 Pierce, E.C. 395*
 Pierce, J.D. 395
 Pike, R.M. 50*, 62, 63, 64,
 65, 102*, 103*,
 110, 111, 112,
 113, 214*, 407
 Pille, E.R. 526*
 Piper, F.J. 669, 670, 675, 676
 Pipher, W.V. 317*, 585*
 Pirt, S.J. 632
 Pistocco, L.R. 215*
 Pittaway, E.M. 586*
 Polyakov, A.A. 1027*
 Pomeroy, B.S. 393
 Poppensiek, G.C. 527*, 907, 930
 Porter, F.E. 739*
 Porter, R. 788
 Post, R. 528*
 Powell, E.J. 1035
 Powell, M.E. 880*
 Prewett, W.L. 836
 Pribnow, J.F. 740*
 Prickett, P.S. 962
 Puck, T.T. 743, 816, 881*, 1028*
 Puckvin, J. 145
 Puetzer, B. 1011
 Punte, C.L. 1029*

R

Ragen, C.A. 127
 Ranz, W.E. 820*
 Raphael, S.S. 216*
 Rasmussen, A.F. 367
 Rassweiler, C.F. 588*
 Ratcliffe, H.L. 318*, 754
 Retner, M. 865
 Ravdin, K.G. 713
 Rawson, A.J. 760
 Ray, F.E., Jr. 741*

Raymond, W.F. 1020
 Rlyock, F.J. 941
 Read, R.E., Jr. 1017
 Read, S. 394
 Reber, E.F. 1017
 Reber, H. 217*
 Rees, R.D.W. 1017, 1018, 482,
 501, 848
 Reich, C.V. 270
 Reid, D.D. 104*
 Reinhardt, F. 1017
 Reitzman, M. 1017
 217*, 218*, 219*,
 220*, 221*, 224*,
 225*, 226*, 438,
 502, 525, 642*,
 721, 882*, 883*
 Remlinger, M.P. 530*
 Remo, W.J. 940
 Renoux, G. 531*
 Rentschler, H.C. 722*
 Renzetti, N. 697*
 Rewell, R.E. 396*
 Reyniers, J.A. 321*, 589*, 590*
 Reynolds, D.J. 884*
 Reynolds, L.I. 441, 981
 Riazatt, M.A. 532*
 Rich, S.T. 322*, 439*
 Rickell, M. 323*
 Riddle, K.B. 962
 Riley, R.L. 54*, 227*,
 42*, 655*
 Rixton, F.H. 715
 Roark, K.T. 228*
 Roark, R.C. 932
 Robbins, E.S. 328
 Robbins, F.C. 127*, 128*, 397*
 Robbins, M. 55*
 Roberts, G.B.S. 492, 493
 Roberts, J.L. 962*
 Robertson, L. 232, 320
 Robertson, O.H. 217, 43*, 1030*
 Robinson, D.T. 231, 320
 Robinson, E. 692
 Robinson, H.J. 509
 Robinson, J.M. 472
 Robson, E. 1025
 Rodgers, H. 24, 243
 Roe, F.J.C. 217*, 918*
 Roessler, W.G. 744*
 Rohles, F.H. 1042*
 Romer, P.H. 533*
 Ronge, H. 715
 Rooks, R. 554*
 Rosebury, T. 1017, 29*,
 745*, 1031*

Rosenthal, S.R.	230*, 231*, 324*, 234*	Sevian, M.	235*
Rosenzweig, A.L.	885*	Sewall, H.	325*
Roth, N.G.	874	Shaffer, H.C.	823
Rothe, E.	535*	Sharp, J.B.	907
Routien, J.B.	231, 324	Sharpe, B.M.	699*
Rowe, T.W.	1025	Sheinberg, H.	595*
Rowe, W.P.	325*	Shelesnyak, M.C.	864
Rowen, J.	375	Shepard, C.C.	143*
Rowsell, H.C.	338*, 399*	Sherfey, J.M.	144*
Royal Institute of Chemistry	57*	Shimada, F.T.	347
Royce, A.	945, 963*, 964*	Shipe, E.L.	827
Ruch, J.P.	303	Shipee, E.D.	855
Ruch, T.C.	1000*	Shockman, G.D.	886*
Rud, C.	173	Shoenicke, A.C.	515
Ruddy, J.M.	698*	Shone, J.A.V.	1015
Runkle, R.S.	591*, 592*	Short, D.J.	314, 330*, 723*, 1026
Rupe, C.E.	913	Shubladze, A.K.	107*
Rustigan, R.	128, 397	Siegmund, H.B.	792
		Sigel, M.M.	65, 113
		Sikes, R.K.	463
		Silverberg, R.J.	474, 475, 476
		Silverman, M.S.	740
		Sinha, S.K.	539*
		Skaliy, P.	829
		Skeehan, R.A.	967*
		Skoblev, N.M.	708
		Slagle, E.C.	70
		Slanetz, C.A.	331*
		Slater, E.A.	543
		Slepushkin, A.N.	108*, 129*, 236*
		Sloan, R.A.	237*, 332*
		Sloan, R.F.	861
		Smadel, J.E.	59*, 238*, 333*, 403*
		Smillie, W.G.	153
		Smith, B.J.W.	404*
		Smith, C.E.	65, 113, 239*, 240*, 540*
		Smith, D.A.	887*
		Smith, D.T.	541*
		Smith, G.S.	241*
		Smith, G.W.	798
		Smith, I.M.	515
		Smith, J.K.	334*
		Smith, J.R.E.	760
		Smith, J.W.	293
		Smith, L.	596*
		Smith, V.H.	755
		Smith, W.	405*
		Smith, W.E.	283
		Snow, D.L.	597*, 598*, 700*
		Snyder, W.C.	942
		Soave, O.A.	335*
		Sogen, H.E.	940
		Sohns, V.E.	774
		Solberg, A.N.	823*
Sabin, A.B.	401*, 402*		
Sacquet, E.	531		
Saito, M.T.	540		
Salaman, M.H.	917		
Sandiford, B.R.	232*, 326*		
Santero, G.	999		
Satraine, S.F.	506		
Savan, M.	965*		
Sawyer, K.F.	821*		
Saxholm, R.	233*, 234*		
Schadt, C.	822*		
Schaefer, J.P.	593*		
Schafer, W.	106*		
Scharnhorst, G.R.	671		
Scheckmeister, I.L.	796		
Schley, D.G.	966*		
Schmidt, L.H.	536*		
Schmitt, R.F.	717		
Schmitt, S.C.	986		
Schnurrenberger, P.R.	235*		
Schrall, K.	393		
Schroeder, C.R.	304, 327*		
Schulze, M.L.	103		
Schwab, H.M.	58*		
Schwab, J.L.	760, 761		
Schwarte, L.H.	537*		
Schwarz, J.	216, 328*		
Scott, R.	594*		
Searle, C.E.	919*		
Seetharaman, C.	498		
Segeler, J.C.	751		
Seller, H.E.	356		
Sessons, S.M.	409		

S

U.S. Navy Bureau of Yards
and Docks 606*

U.S. Public Health
Service 607*, 608*, 749

U.S. Public Health Ser-
vice, Division of
Hospital and Medical
Facilities 610*

U.S. Public Health Ser-
vice in collaboration
with Coll. Am. Public H.
Urban. B. B. 615*

V

Valenstein, E.S. 343*

Valente, L.J. 444*

Van Bruggen, A.T. 445*

Van den Bergh, L. 344*

Van den Ende, M. 446*, 447*

Van Metre, T.E., Jr. 115*

Van Tungenen, H.A.E. 353

Van Ulsen, E.W. 520

Vardaman, T.H. 544*

Vardonis, P.W. 526

Verlinda, J.E. 54

Vernis, A.A. 75*

Veterans Administration-
Armed Forces Cooperative
Study on the Chemotherapy
of Tuberculosis 44*

Veterans Administration-
Army-Navy Conference on
the Chemotherapy of Tuber-
culosis 44*

Vickers, J.H. 447*

Vojnovich, C. 77

Vrolijk, H. 345*

W

Walc, H.W. 44*

Walker, J.F. 147*

Wall, M.M. 44

Wallace, A.T. 14

Wallis, H.C. 143

Wallis, R.C. 54

Walls, E.L. 144*

Walter, C.W. 141

Walter, G.W. 147*

Walter, W.L. 143*

Walton, W.H. 441, 442*

Wari, C.G. 413*

Ward, M.K. 14

Ward, R. 441

Ward, T.G. 24, 244

Wari, W.H. 14

Ware, L.L., Jr. 14

Warner, P. 14*

Warschowsky, E. 914, 915

Watkins, H.M.M. 14

Watko, L.P. 14

Watson, J.A. 14

Wearne, J.T. 14*

Weatherly, J. 14

Wells, A.L. 14

Wend, L.A. 441*, 442*

Weir, C.D. 141

Weir, M. 44*

Weiss, C. 14*

Weiss, E. 14

Wells, P. 14

Wentworth, J.A. 14, 14*

Wells, G.A. 14

Wells, W.H. 14, 14*

Wentworth, P.A. 14

Wescott, R.R. 14*

Weyer, F. 14

Wheatley, G.M. 14

White, P.A.H. 14*

Whitfield, W.H. 14

Whitwell, F. 14*

Wilder, R. 414*, 415*

Wilcox, J.D. 14

Willard, D.H. 14

Williams, A.M. 14

Williams, E.L. 14

Willis, M.M. 14

Williston, P.H. 14

Wilmot, C.H. 14*

Wilson, A.H. 14

Wilson, M.H. 14, 14*

Wingo-Hansen, K. 14

Wise, J. 14

Wolf, H.W. 14

Wolfe, E.K. 14*

Wolfe, J. 14

Wolman, A. 14

Wolochow, H. 14, 14*

Wolochow, W. 14

Wong, J.B.	820
Wood, W.	347*
Woodson, W.E.	615*
Woodward, M.F.	924*
Worden, A.N.	616*
Wright, A.M.	402
Wright, F.H.	454
Wright, J.F.	348*, 895*
Wright, J.H.	548*
Wyllie, G.A.P.	1015

X

Xezones, H.	977
-------------	-----

Y

Yaglou, C.P.	210
Yamate, N.	1016
Yanamura, E.Y.	390
Yarnick, W.S.	758*
Yatom, J.	417*
Yeomans, A.H.	941
York, J.E.	706*
Young, G.A.	443, 449*, 450*, 646
Young, R.J.	270, 283

Z

Zacharias, B.	763
Zarafonettis, C.	549*
Zdrodorski, P.F.	82*
Zentner, R.J.	837*
Zhelko-Titarenko, V.P.	759*
Zinkernagel, R.	217
Zippin, C.	203